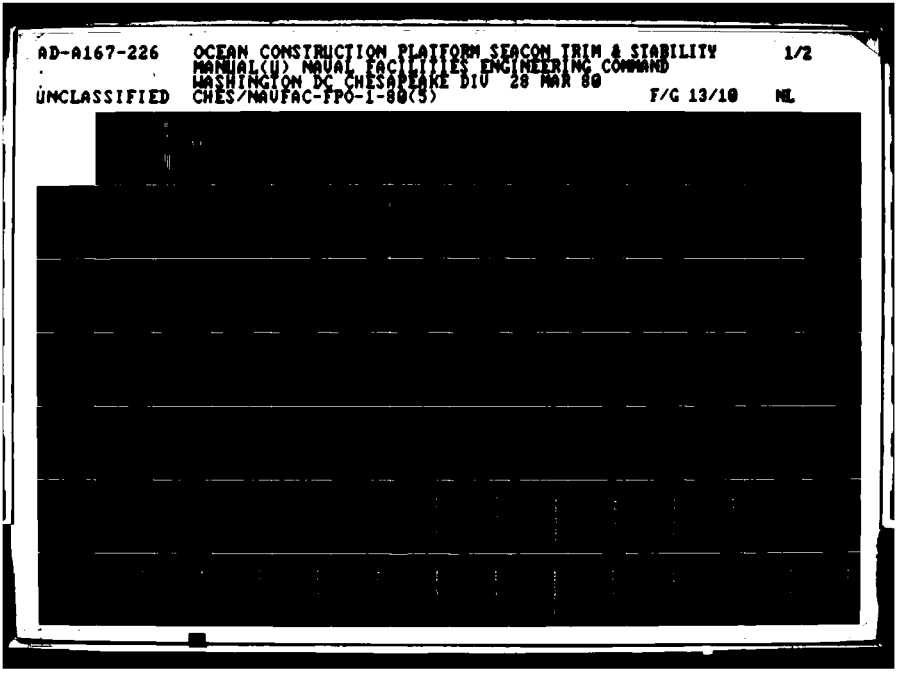
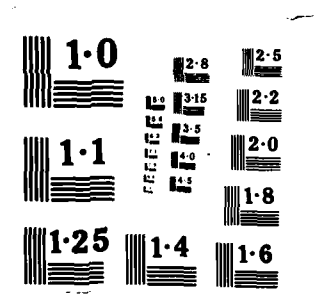
AD-A167-226 OCEAN CONSTRUCTION PLATFORM SEACON TRIM & STABILITY MANUAL(U) NAVAL FACILITIES ENGINEERING COMMAND WASHINGTON DC CHESAPEAKE DIV 28 MAR 80 CHES/NAVFAC-FPO-1-80(5) 1/2

UNCLASSIFIED F/G 13/10 NL




1·0
1·1
1·25
1·4
1·6
2·8
3·15
3·5
4·0
2·5
2·2
2·0
1·8

AD-A167 226

DTIC FILE COPY

(1)

FPO-1-80[5]

OCEAN CONSTRUCTION PLATFORM "SEACON"

DTIC ELECTE MAY 01 1986 S D

TRIM & STABILITY MANUAL

DISTRIBUTION STATEMENT A
Approved for public release;
Distribution Unlimited

PREPARED BY:
GIANNOTTI & ASSOCIATES, INC.

3/28/80

OCEAN ENGINEERING
AND CONSTRUCTION PROJECT OFFICE
CHESAPEAKE DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
WASHINGTON, D.C. 20374

86 4 22 114

Unclassified
SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION Unclassified	1b. RESTRICTIVE MARKINGS
2a. SECURITY CLASSIFICATION AUTHORITY	3. DISTRIBUTION AVAILABILITY OF REP. Approved for public release; distribution is unlimited
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE	
4. PERFORMING ORGANIZATION REPORT NUMBER FPO-1-80(5)	5. MONITORING ORGANIZATION REPORT #
6a. NAME OF PERFORM. ORG. 6b. OFFICE SYM Giannotti & Associates, Inc.	7a. NAME OF MONITORING ORGANIZATION Ocean Engineering & Construction Project Office CHESNAVFACENGCOM
6c. ADDRESS (City, State, and Zip Code)	7b. ADDRESS (City, State, and Zip) BLDG. 212, Washington Navy Yard Washington, D.C. 20374-2121
8a. NAME OF FUNDING ORG. 8b. OFFICE SYM	9. PROCUREMENT INSTRUMENT INDENT #
8c. ADDRESS (City, State & Zip)	10. SOURCE OF FUNDING NUMBERS PROGRAM ELEMENT # / PROJECT # / TASK # / WORK UNIT ACCESS #
11. TITLE (Including Security Classification) Ocean Construction Platforms "Seacon" Trim & Stability Manual	
12. PERSONAL AUTHOR(S)	
13a. TYPE OF REPORT 13b. TIME COVERED FROM TO	14. DATE OF REP. (YYMMDD) 80-03-28 / 15. PAGES 138
16. SUPPLEMENTARY NOTATION	
17. COSATI CODES FIELD GROUP SUB-GROUP	18. SUBJECT TERMS (Continue on reverse if nec.) Ocean construction, Platforms, Seacon

19. ABSTRACT (Continue on reverse if necessary & identify by block number)
The Ocean Construction Barge SEACON was originally constructed as a U.S Navy YFNB barge of World War II vintage, then later acquired by the National Aeronautics and Space Administration and converted to a special purpose barge. At that time it was operated under the name PROMISE. The Navy reacquired (Con't)

20. DISTRIBUTION/AVAILABILITY OF ABSTRACT SAME AS RPT.	21. ABSTRACT SECURITY CLASSIFICATION
22a. NAME OF RESPONSIBLE INDIVIDUAL Jacqueline B. Riley	22b. TELEPHONE 202-433-3881 / 22c. OFFICE SYMBOL

DD FORM 1473, 84MAR — SECURITY CLASSIFICATION OF THIS PAGE

BLOCK 19 (Con't)

the barge and converted it once again for its present functional purpose of supporting the Naval Facilities Engineering Command in ocean construction projects. This conversion which was effected in 1976 by the Norfolk Shipbuilding and Dry Dock Company involved the addition of diesel propulsion engines, Voith-Schneider cycloidal propulsors, and extensive redesign of the interior arrangements and superstructure. The barge was renamed SEACON. Subsequent shipyard availabilities in 1979 at Jacksonville Shipyards, Bellinger Division and Tracor Marine, Ft. Lauderdale involved the addition of a gantry crane and deck winches and the alteration of anchor handling arrangements.

The predecessor Trim and Stability Study was done in march 1975 by J.J. Henry Company, Inc., the naval architecture firm which developed the plans for the 1976 conversion. The study was premised on the reported weight and Center of Gravity of the PROMISE and updated by the estimated effects of the weight changes involved in the conversion. There are no records to indicated whether the PROMISE Center of Gravity was based on an inclining experiment or simply a design weight estimate. Subsequent to the J.J. Henry study there were some minor design changes with weight implications which occurred in the 1976 conversion and additional changes which resulted from the 1979 shipyard availabilities. Giannotti and Associates, Inc. had been contracted to perform an inclining experiment to measure the Center of Gravity of the barge following the Bellinger availability in July 1979; however, scheduling difficulties force deferment of the experiment until November 2, 1979. In the pre-experiment survey the presence of loose liquids was detected in several of the inner bottom tanks previously presumed dry. Again, tight scheduling constraints prevented hand removal of the liquids. The experiment was conducted but failed to produce reliable information because of the presence of these liquids. A second attempt to conduct the experiment in Portsmouth, VA had to be aborted, again because of schedule commitments. In order to provide the SEACON with current trim and stability information, Giannotti and Associates, Inc. was instructed to update the previous study using the best information available.

from 3d sheet

TABLE OF CONTENTS

Introduction 1

Example Loading Condition Calculation 3

Hydrostatic Curves 11

Cross Curves of Stability 12

Tank Arrangement 13

Minimum Required GM 14

Capacity Table 15

Trim & Heel as a Function of Crane Loading & Position 17

Summary of Conditions 21

Loading Conditions ; Appendices :

- Light Ship I 22
- Light Ship II 24
- Capacity 26
- Full Load 29
- Operating IA 32
- Operating IIA 35
- Operating IIIA 38
- Operating IB 40
- Operating IC 43

Blank Loading Condition Forms 46

Appendix A, Tank Tables A-1

Appendix B, Curves of Statical Stability Calculation B-1

Appendix C, Wind Heeling Arm Tables C-1

Appendix D, Light Ship Weight Estimate D-1

Appendix E, References E-1

QUALITY INSPECTED 3

Codes

Dist | Avail and/or Special

A-1

INTRODUCTION

The Ocean Construction Barge SEACON was originally constructed as a U. S. Navy YFNB barge of World War II vintage, then later acquired by the National Aeronautics and Space Administration and converted to a special purpose barge. At that time it was operated under the name PROMISE. The Navy reacquired the barge and converted it once again for its present functional purpose of supporting the Naval Facilities Engineering Command in ocean construction projects. This conversion which was effected in 1976 by the Norfolk Shipbuilding and Dry Dock Company involved the addition of diesel propulsion engines, Voith-Scneider cycloidal propulsors, and extensive redesign of the interior arrangements and superstructure. The barge was renamed SEACON. Subsequent shipyard availabilities in 1979 at Jacksonville Shipyards, Bellinger Division and Tracor Marine, Ft. Lauderdale involved the addition of a gantry crane and deck winches and the alteration of anchor handling arrangements.

The predecessor Trim and Stability Study was done in March 1975 by J. J. Henry Company, Inc., the naval architecture firm which developed plans for the 1976 conversion. The study was premised on the reported weight and Center of Gravity of the PROMISE and updated by the estimated effects of the weight changes involved in the conversion. There are no records to indicate whether the PROMISE Center of Gravity was based on an inclining experiment or simply a design weight estimate. Subsequent to the J. J. Henry study there were some minor design changes with weight implications which occurred in the 1976 conversion and additional changes which resulted from the 1979 shipyard availabilities. Giannotti and Associates, Inc. had been contracted to perform an inclining experiment

to measure the Center of Gravity of the barge following the Bellinger availability in July of 1979; however, scheduling difficulties forced deferment of the experiment until November 2, 1979. In the pre-experiment survey the presence of loose liquids was detected in several of the inner bottom tanks previously presumed dry. Again, tight scheduling constraints prevented hand removal of the liquids. The experiment was conducted but failed to produce reliable information because of the presence of these liquids. A second attempt to conduct the experiment in Portsmouth, VA had to be aborted, again because of schedule commitments. In order to provide the SEACON with current trim and stability information, Giannotti and Associates, Inc. was instructed to update the previous study using the best information available.

The approach to the problem has been to use the J. J. Henry study as a basis and correct for weight changes resulting from change orders which were placed during the 1976 conversion and for the weight changes which resulted from the 1979 shipyard availabilities. A summary of these weight changes is included in Appendix D. The original Hydrostatic Curves and Cross Curves of Stability from the J. J. Henry report have been replotted and reproduced in this manual; however, curves of Statical Stability for the various loading conditions have been corrected to reflect the weight and center changes. A description of the procedure followed is contained in Appendix B. The original loading conditions used in the J. J. Henry study have been used in this manual with one condition added. In the original work the Light Ship Condition included the anti-roll tanks filled to 50% of capacity. A new condition has been added with these tanks empty. A summary of the nine loading conditions and the barge characteristics at these conditions appears on page 21. Details for each

loading condition follow on pages 22 through 48. For each loading condition a summary sheet is presented followed by a tabulation of the individual compartment loadings and a plot of the curve of Statical Stability for that condition.

Several new features have been added in this manual as compared to the previous Trim and Stability Study. First, an example loading calculation is presented on pages 3 through 10 with detailed step-by-step instructions for calculation of the displacement, drafts and GM at any loading condition which may not be approximated by one of the standard loading conditions. Next, a fold-out diagram of the tank arrangement has been furnished on page 13 following the fold-outs of the Hydrostatic Curves and Cross Curves of Stability, pages 11 and 12. Existing Tank Capacity Tables have been reproduced and bound in this volume as Appendix A for convenience of reference. A curve of minimum required GM to meet Coast Guard wind-heel stability requirements is shown on page 14. Comparison of values from this curve with GM values shown for the actual loading conditions shown on page 21 reveals the truly excessive amount of stability which the SEACON possesses. Actual and required GM values are also shown in the loading condition summary sheets. A further feature of the manual is the analysis of the effect of gantry crane position and loading on trim and stability which is presented with a step-by-step explanation on pages 17 through 20.

In general the format of the J. J. Henry study has been followed in developing the manual and some information has been reproduced directly. This includes the Compartment Capacity Table, (page 15), the Loading Condition forms, the Compartment Loading forms, Curves of Form, (page 11),

Cross Curves of Stability, (page 12), the Tank Tables (Appendix A), the Tabular Curves of Intact Stability (Appendix B), the Wind Heeling Arm Tables (Appendix C), and the original SEACON Light Ship Weight Estimate (Appendix D).

One final comment should be made about the accuracy of the vertical centers estimated in this manual. To place error bounds on the estimated vertical centers is quite difficult since there is no information available on the quality of the Vertical Center of Gravity figure for the barge PROMISE, a number which forms the basis for both the J. J. Henry estimate and this further update. However, accepting the PROMISE VCG as a given and making estimates of the maximum likely error in both Henry and G&A estimates leads to the observation that the vertical centers reported herein should be within $\pm$ 6 inches of the true value.

EXAMPLE LOADING CONDITION CALCULATION

It may be noted that at the end of this manual are included blank loading condition forms. This includes a Trim and Stability Summary form and a Compartment Loading form. This section explains how to use these forms in the case of a new loading condition.

An example loading condition, Operating X, is included in this section and should be used in conjunction with this example. The first step is to determine the deadweight of the ship. All the items in 1, page 8, must be estimated. The weights, vertical and horizontal centers of gravity, and vertical moment of free surface, if any, are required. The weights and centers of gravity for liquid in any of the tanks can be found in the tank tables in Appendix A. The vertical moment of the free surface is found by:

$$V.M. = \frac{i_T}{\delta}$$

where,

i_T = the transverse moment of inertia of the free surface and δ = density of the liquid in the tank.

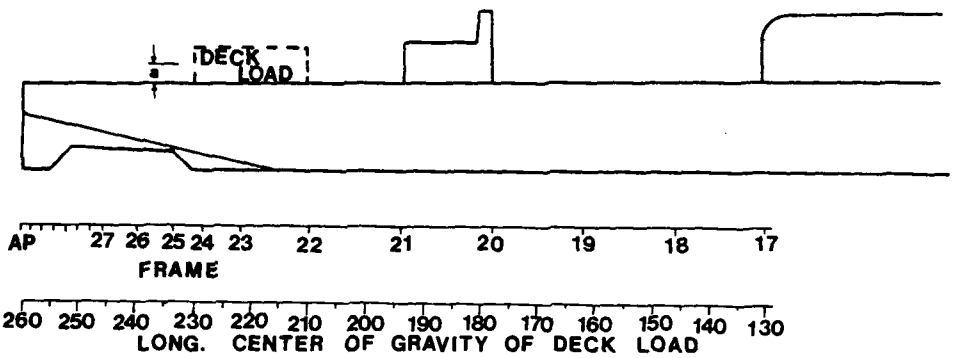
The Compartment Loading form may then be used to figure the total weight, center of gravity and vertical moment of the free surface. For each section of Fuel Oil, Fresh Water, Sludge and S.W. Ballast, the subtotal Horizontal and Vertical Moment is divided by the subtotal weight to obtain a horizontal and vertical center of gravity. The vertical moment of the free surface can be added in each section and shown in the subtotal line. It is important to note the references for the centers of gravity: the base line for the VCG and the forward

perpendicular for the LCG.

The items in 1 may then be appropriately filled in. The values under Crew & Effects, and Stores are constants which probably fit most conditions other than light ship. These values, if used, may be found on any form except light ship condition. Deck load and Cable stores are variables which may be included on the forms. The figure on page 5 gives a convenient way of determining the center of gravity for each of these loads. Locate on the figure the position of the deck load and/or cable load longitudinal center of gravity directly on the scale below the figure.

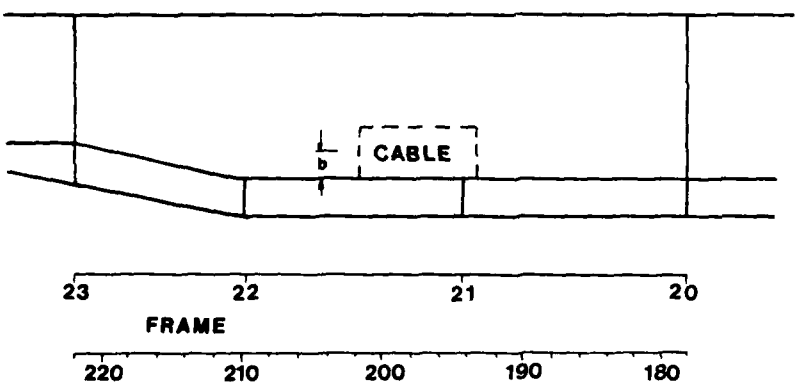
The computational steps to complete each of the numbered items on the Loading Condition Summary Sheet, page 8, are outlined in tabular form on pages 6 and 7.

DETERMINING THE CENTER OF GRAVITY OF DECK LOAD AND CABLE IN CABLE STORES



V.C.G. = 15 + a

a = HALF HEIGHT OF DECK LOAD



V.C.G. = 3 + b

b = HALF HEIGHT OF CABLE

Item	Source
①	Given
②	Constant
③	Summation of all values in above column
④	Summation of all values in above column
⑤	Summation of ③ and light ship vertical moment.
⑥	Summation of ④ & light ship weight
⑦	⑤ ÷ ⑥
⑧	Summation of all values in above column
⑨	Summation of ⑧ and light ship horizontal moment
⑩	⑨ ÷ ⑥
⑪	Summation of all values in above column
⑫	Curves of form using displacement, ⑥
⑬	Curves of form using draft, ⑫
⑭	Curves of form using draft, ⑫
⑮	⑨ ÷ ⑥
⑯	Absolute value of (⑮ - ⑭)
⑰	$\frac{⑯ \times ⑥}{⑬ \times 12.0}$ If LCG is greater than LCB, the trim is by stern otherwise trim by head.
⑱	Curves of form using draft ⑫
⑲	If trim by head: $⑫ + ⑰ \times (\frac{⑱}{260.0})$ If trim by stern: $⑫ - ⑰ \times (\frac{⑱}{260.0})$
⑳	If trim by head: $⑫ - ⑰ \times (1.0 - \frac{⑱}{260.0})$ If trim by stern: $⑫ + ⑰ \times (1.0 - \frac{⑱}{260.0})$

(21)*	If trim by head: $(12) + \left[(17) \times \left(\frac{(18)}{260.0}\right)\right] \times \left[\frac{250.0}{(18)} - 1.0\right]$ If trim by stern: $(12) - \left[(17) \times \frac{(18)}{260}\right] \times \left[\frac{250.0}{(18)} - 1.0\right]$
(22)*	If trim by head: $(12) - \left[(17) \times \left(1.0 - \frac{(18)}{260.0}\right)\right] \times \left[\frac{210.0 - (18)}{260.0 - (18)}\right]$ If trim by stern: $(12) + \left[(17) \times \left(1.0 - \frac{(18)}{260.0}\right)\right] \times \left[\frac{210.0 - (18)}{260.0 - (18)}\right]$
(23)	Curves of form using draft (12)
(24)	(5) ÷ (6)
(25)	(23) - (24)
(26)	(11) ÷ (6)
(27)	(25) - (26)
(28)	Page 14
(29)	(6) x (27) x 0.01745

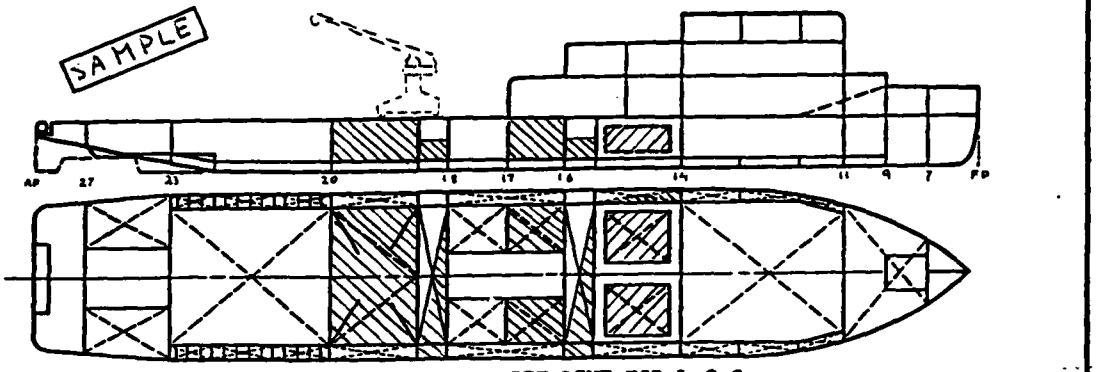
*Draft marks are located as follows:

Fwd mark is 10 ft. aft of F.P.
Aft mark is 50 ft. fwd of A.P.

TRIM & STABILITY SUMMARY

CONDITION OF VESSEL: OPERATING X | DATE: | PAGE: 8

CARGO ____ % CONSUMABLES ____ % BALLAST ____ | BY: | JOB NO.



REF LINE FOR V.C.G. B.L. REF LINE FOR L.C.G. F.P.

SYMBOL	COMPARTMENT	CU FT TON	WEIGHT TONS	V.C.G. ADV. B.L. FT.	MOMENT ADV. BL FT TONS	LCG ABT. FP FT	MOMENT ABT. FP FT TONS	VERT. MOM OF F.S. FT TONS
	Crew & Effects		6.0	24.0	144	62.0	372	
	Stores		45.0	20.0	900	26.0	1170	
	Fuel Oil		105.2	7.45	784	201.0	21154	11
	Fresh Water		112.6	8.25	928	94.0	10584	282
	Sludge		19.3	4.35	84	94.0	1814	4
(1)	S.W. Ballast		458.1	9.00	4124	153.6	70369	
	Anti Roll Tks		120.8	5.57	672	130.0	15704	4096
	Cable Stowage							
	Deck Load							
			(4)					
	DEADWEIGHT		867.0		(3) 7636		(8) 121167	4393
(2)	LIGHT SHIP		1338.2	15.5	20771	125.03	167313	
	DISPLACEMENT		2205.2	12.88	(5) 28407	130.82	(9) 288480	(11) 4393

TRIM (6)

DRAFT AT LCF	=	(12) 8.08	FT
MOMENT TO ALTER TRIM 1"	=	(13) 469	FT-TS
LCB AFT OF FP	=	(14) 128.73	FT
LCG AFT OF FP	=	(15) 130.82	FT
TRIMMING LEVER	=	(16) 2.09	FT
TRIM (BY STERN, ~~HEAD~~)	=	(17) 0.82	FT
LCF AFT OF FP	=	(18) 135.15	FT

DRAFT AT FP = (19) 7.65 FT AP = (20) 8.47 FT

DRAFTS AT DRAFT MARKS

FWD (21) 7.72 FT AFT (22) 8.32 FT

(7) STABILITY (10)

METACENTRE ABOVE BL	$\overline{KM}$ =	(23) 29.50	FT
CENTRE OF GRAVITY ABV BL	$\overline{KG}$ =	(24) 12.88	FT
METACENTRIC HEIGHT	$\overline{GM}$ =	(25) 16.62	FT
ALLOWANCE FOR FREE SURFACE	=	(26) 1.99	FT
$\overline{GM}$ CORRECTED	=	(27) 14.63	FT
$\overline{GM}$ REQUIRED	=	(28) 1.05	FT
MOMENT TO HEEL 1°	=	(29) 563	FT-TS

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

S = SLUDGE
B = BALLAST
F.W. = FRESH WATER
F.O. OR D.C. = F.O. OR DIESEL CARGO
DRY CARGO = DRY CARGO
OIL CARGO = OIL CARGO

OPERATING X [SAMPLE]

COMPARTMENT LOADING

Ref. Line for L.C.G. F.P.

Ref. Line for V.C.G. B.L.

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

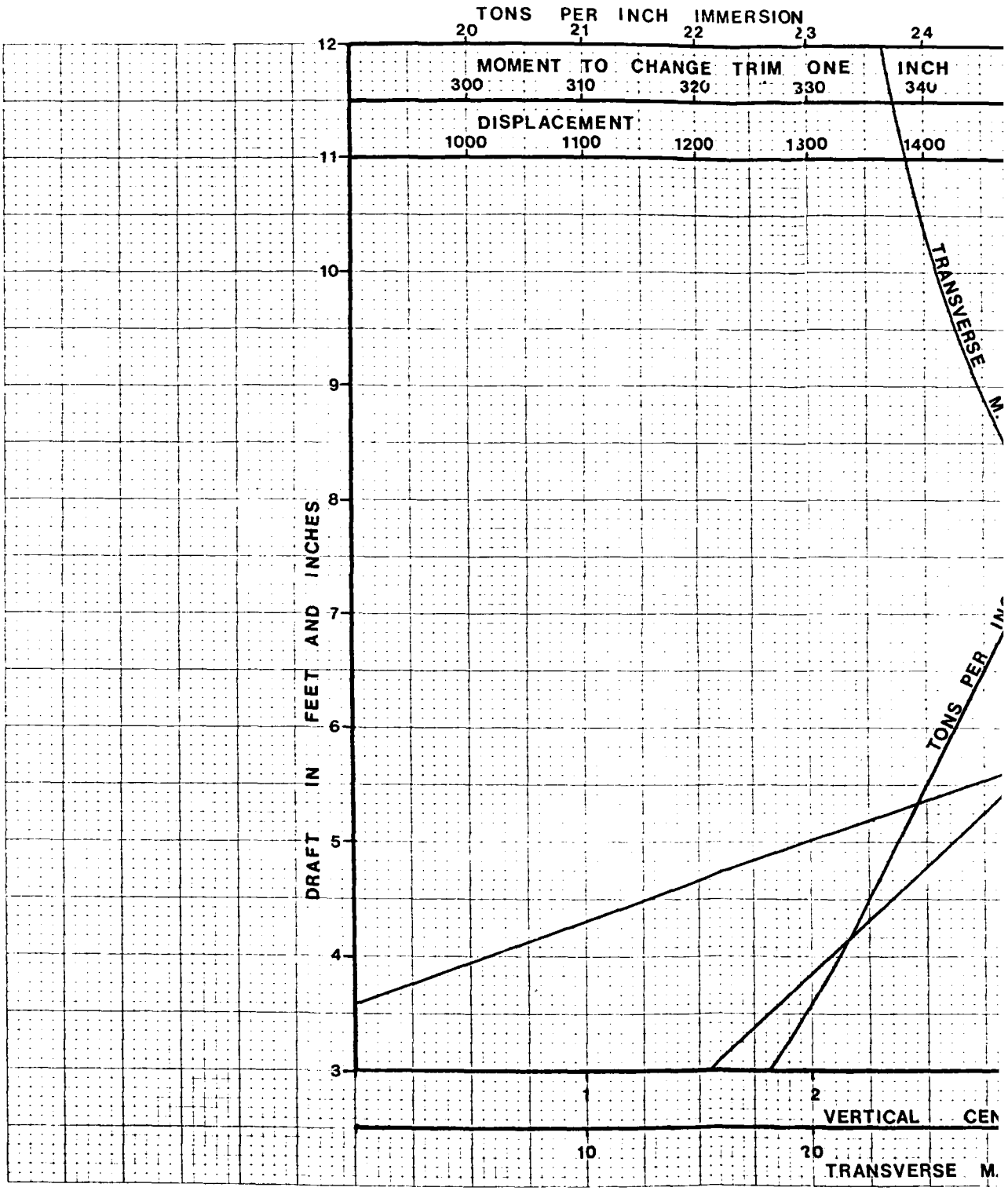
COMPARTMENT		FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM. OF F. S. FT. TONS
Fuel Oil									
#1 Wing Tank	(S)	11-12							
#2	(P)	11-12							
#3	(S)	12-13							
#4	(P)	12-13							
#5	(S)	13-14							
#6	(P)	13-14							
#13	(S)	20-21		21.0	7.64	160	186.0	3906	2
#14	(P)	20-21		12.8	6.28	80	188.6	2414	1
#15	(S)	21-22		21.0	7.60	160	202.0	4242	2
#16	(P)	21-22		21.0	7.60	160	202.0	4242	2
#17	(S)	22-23		14.7	7.64	112	216.0	3175	2
#18	(P)	22-23		14.7	7.64	112	216.0	3175	2
SUBTOTAL				105.2	7.45	784	201.0	21154	11
Fresh water									
F.W. Tank	(S)	15		56.3	8.25	464	94.0	5292	141
F.W. Tank	(P)	15		56.3	8.25	464	94.0	5292	141
SUBTOTAL				112.6	8.25	928	94.0	10584	282
Lub. Oil									
Sludge Tank		14-15½		19.3	4.35	84	94.0	1814	4
S.W. Ballast									
#1 D.B. Tank		7-11							
#2		11-14							
#3		14-17							
#4		17-20							
#5		20-23							
#7 Wing Tank	(S)	14-15½							
#9	(S)	16-18							
#10	(P)	16-18							
#11	(S)	18½-20							

OPERATING X SAMPLE

COMPARTMENT LOADING CONT.

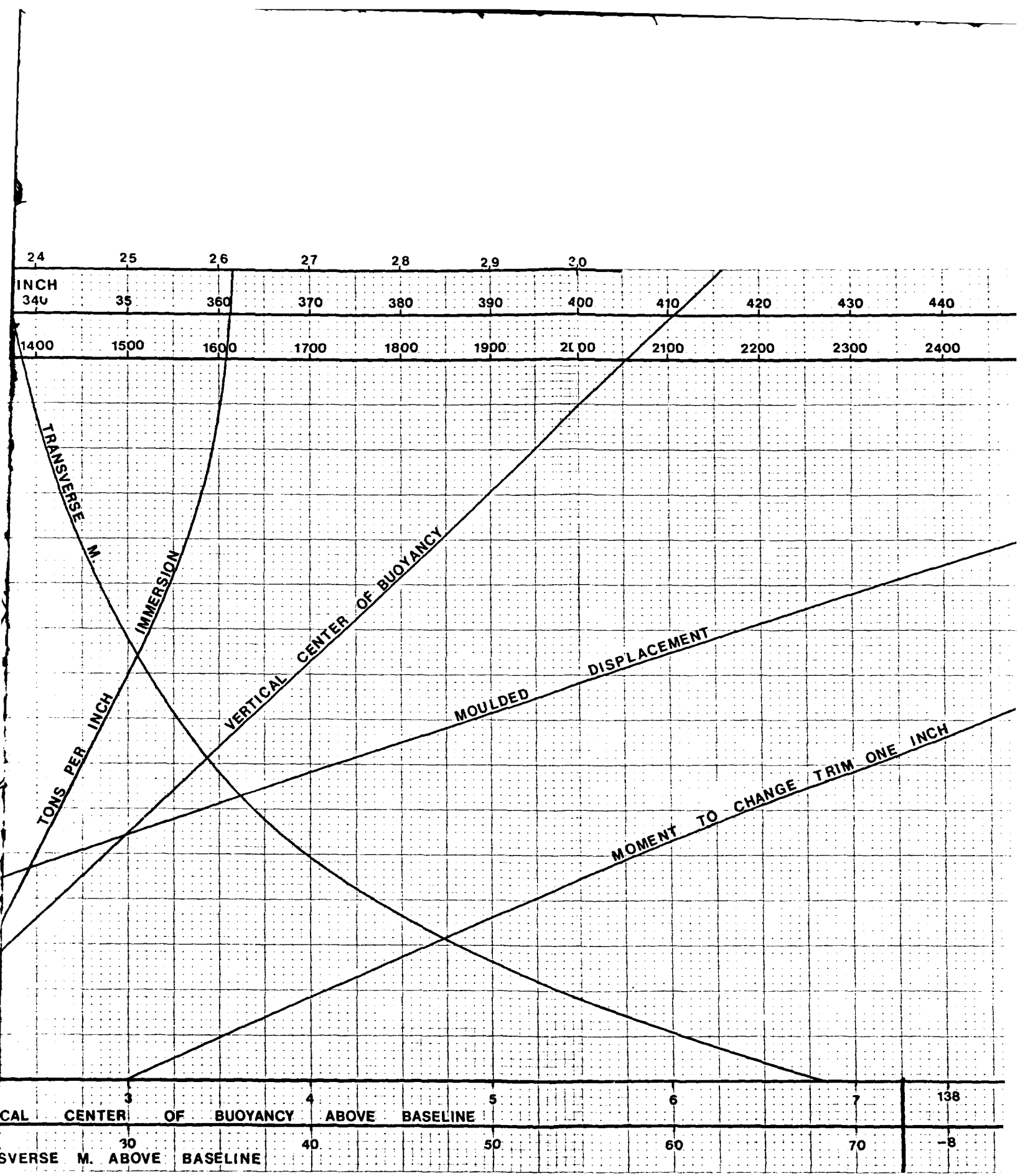
GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

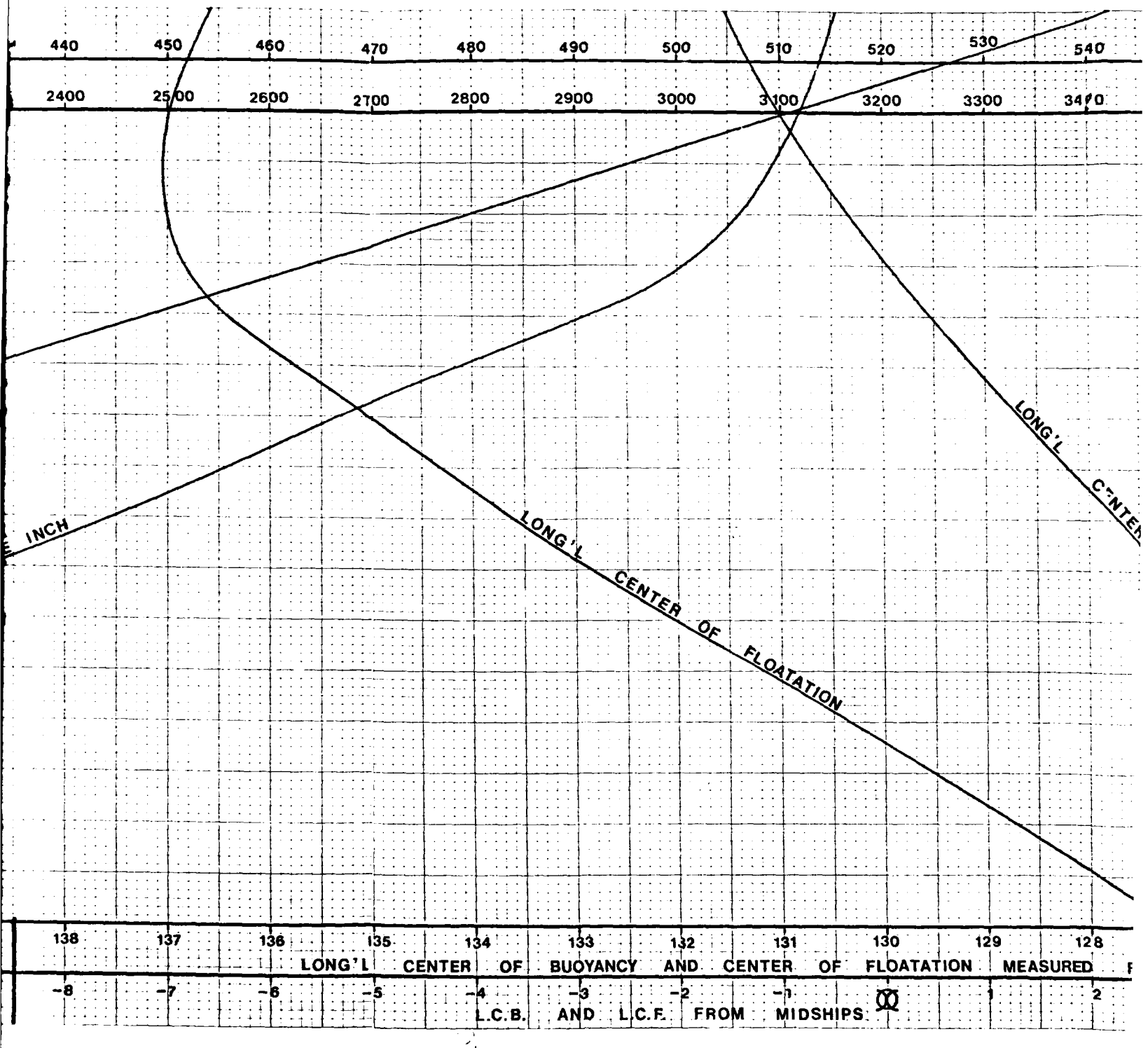
COMPARTMENT	FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM OF F. S. FT. TONS
#12 Wing Tank (P)	18½-20							
#1 Deep Tank (S)	16-17		64.5	9.00	581	122.0	7869	
#2 (P)	16-17		64.5	9.00	581	122.0	7869	
#3 (S)	17-18							
#4 (P)	17-18							
#5 (CL)	18½-20		329.1	9.00	2962	166.0	54631	
#6 (S)	23-27							
#7 (P)	23-27							
SUBTOTAL			458.1	9.00	4124	153.6	70369	
Anti Roll Tanks (50%)								
FWD	15½-16		60.4	5.57	336	110.0	6644	2048
AFT	18-19½		60.4	5.57	336	150.0	9060	2048
SUBTOTAL			120.8	5.57	672	130.0	15704	4096
Anti Roll Tanks (100%)								
FWD	15½-16							
AFT	18-19½							
SUBTOTAL								

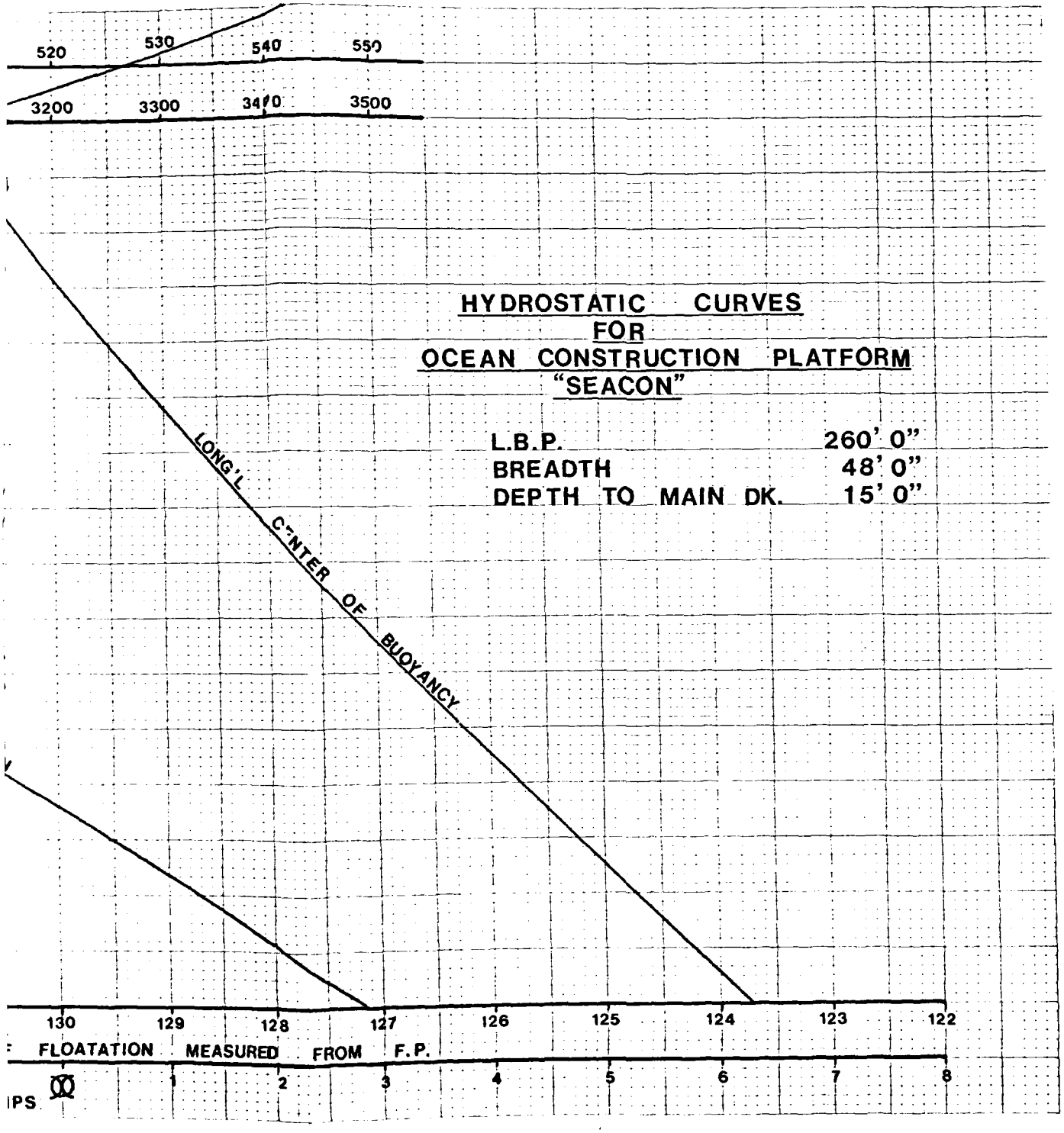


46 1930

K·E 10 X 12 TO THE INCH

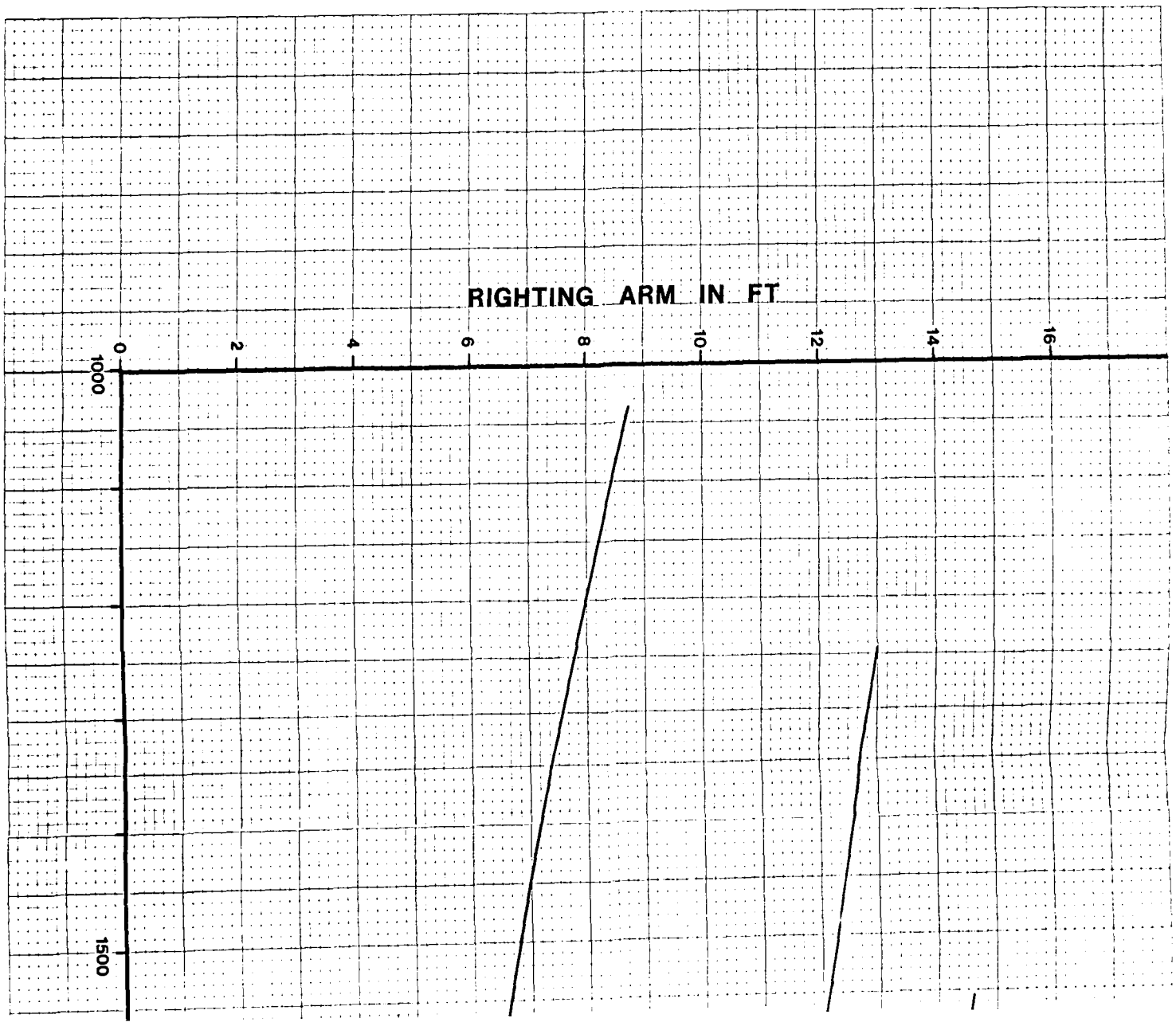

24
25
26
27
28
2,9
3,0
INCH
340
35
360
370
380
390
400
410
420
430
440
1400
1500
1600
1700
1800
1900
2100
2200
2300
2400
TRANSVERSE M.
TONS PER INCH IMMERSION
VERTICAL CENTER OF BUOYANCY
MOULDED DISPLACEMENT
MOMENT TO CHANGE TRIM ONE INCH
3
4
5
6
7
138
CAL CENTER OF BUOYANCY ABOVE BASELINE
30
40
50
60
70
-8
SVERSE M. ABOVE BASELINE

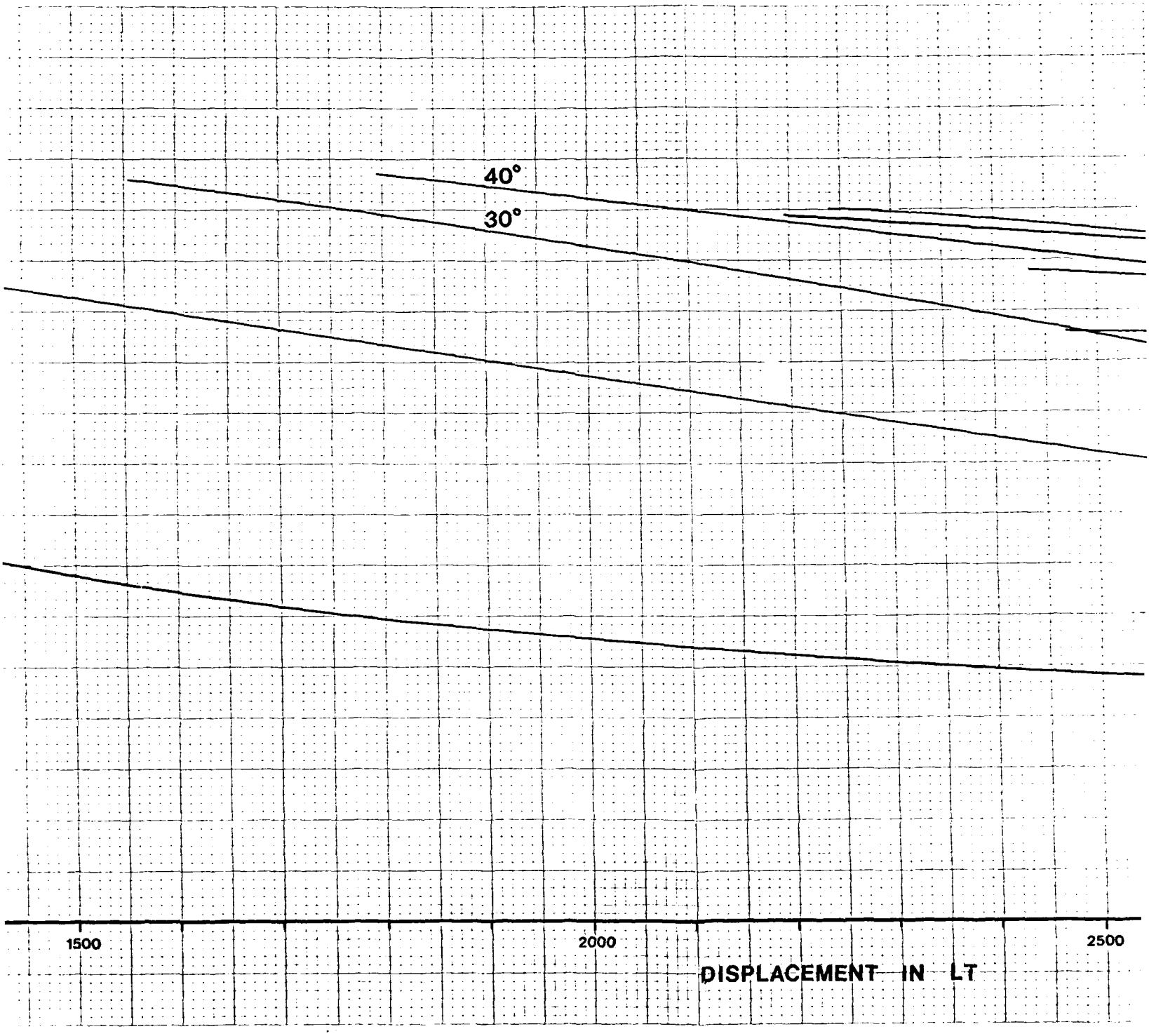

440
450
460
470
480
490
500
510
520
530
540
2400
2500
2600
2700
2800
2900
3000
3100
3200
3300
3400
INCH
LONG'L CENTER OF FLOATATION
LONG'L CENTER
138
137
136
135
134
133
132
131
130
129
128
LONG'L CENTER OF BUOYANCY AND CENTER OF FLOATATION MEASURED
-8
-7
-6
-5
-4
-3
-2
-1
1
2
L.C.B. AND L.C.F. FROM MIDSHIPS

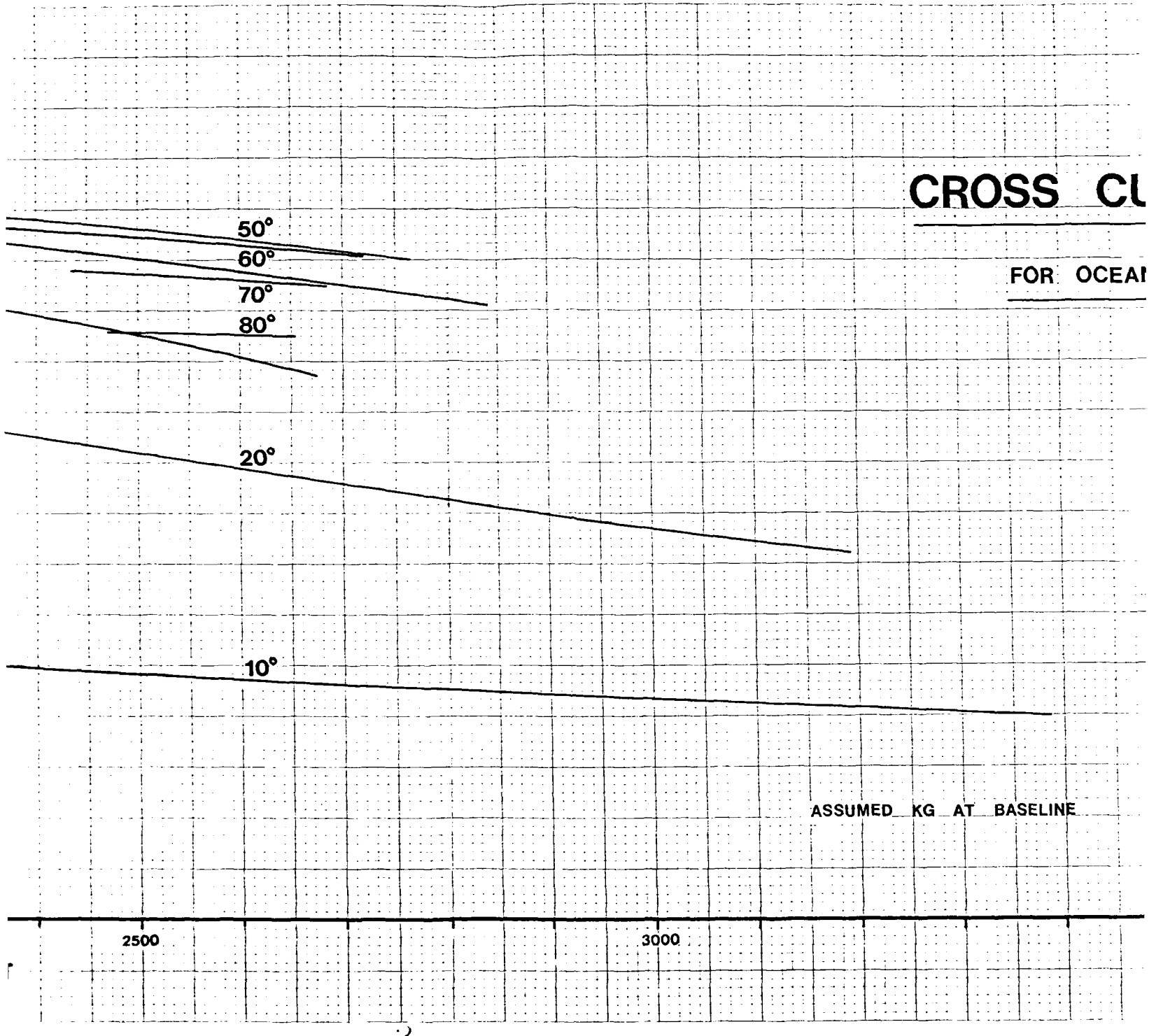

520
530
540
550
3200
3300
3400
3500
HYDROSTATIC CURVES
FOR
OCEAN CONSTRUCTION PLATFORM
"SEACON"
L.B.P. 260' 0"
BREADTH 48' 0"
DEPTH TO MAIN DK. 15' 0"
LONG'L C:NTER OF BUOYANCY
130
129
128
127
126
125
124
123
122
FLOATATION MEASURED FROM F.P.
1
2
3
4
5
6
7
8
IPS

K•E 10 X 12 TO THE INCH
KEUFFEL & ESSER CO

46 1930




40°
30°
1500
2000
2500
DISPLACEMENT IN LT


CROSS CU
FOR OCEAN
50°
60°
70°
80°
20°
10°
ASSUMED KG AT BASELINE
2500
3000

ROSS CURVES OF STABILITY

FOR OCEAN CONSTRUCTION PLATFORM

"SEACON"

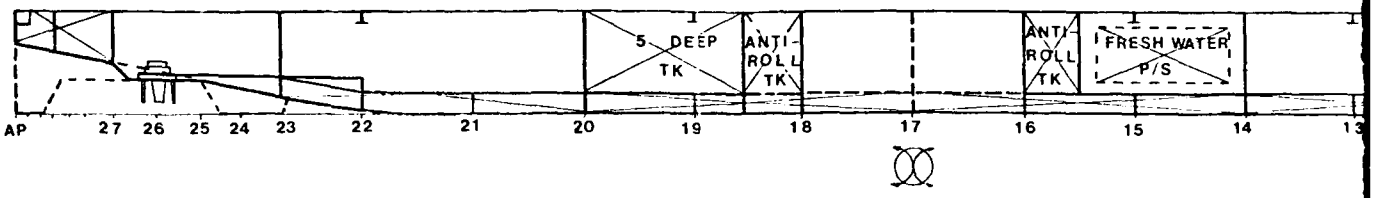
PRINCIPAL DIMENSIONS :

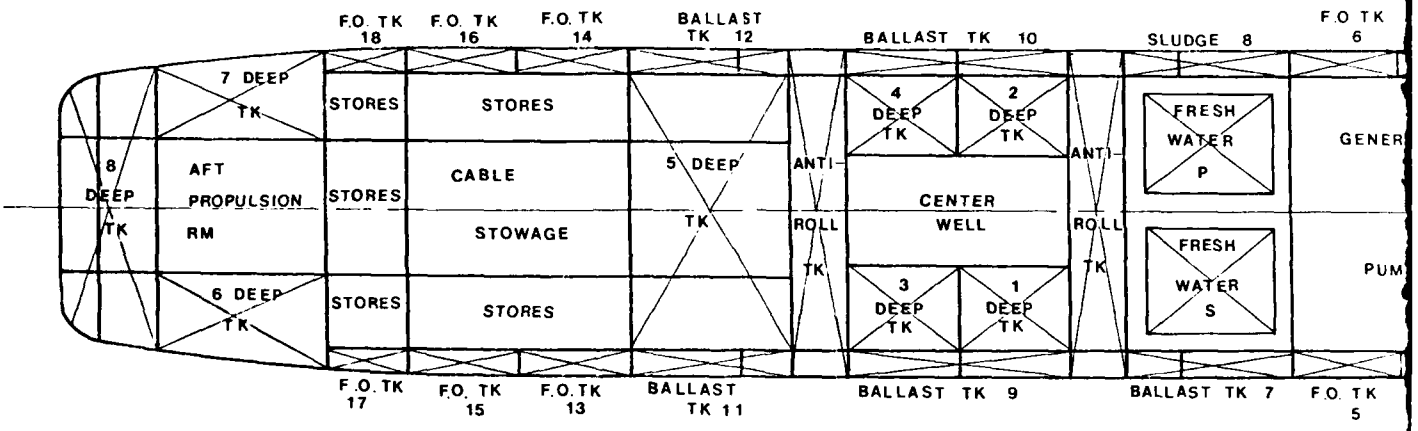
LENGTH	260'- 0"
BREADTH	48'- 0"
DEPTH TO MAIN DK	15'- 0"

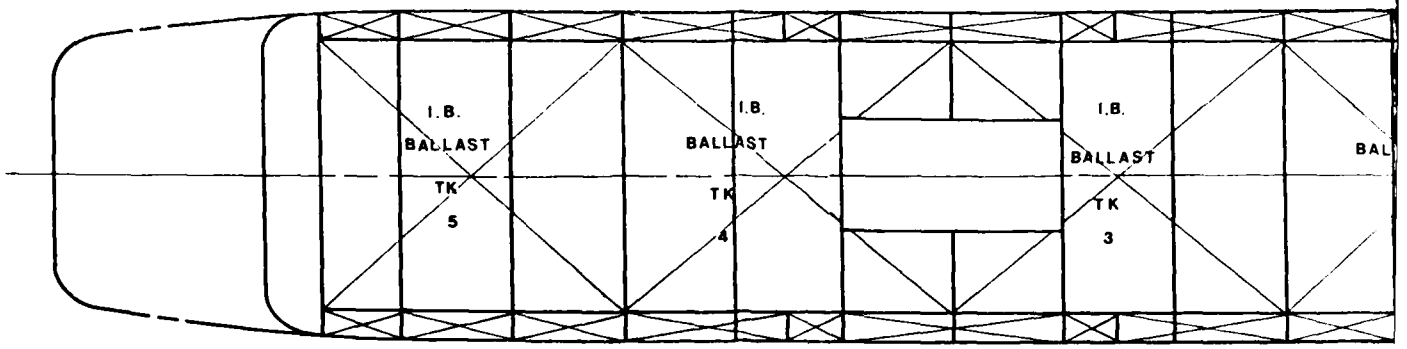
HEELING ANGLE θ (DEG)	SIN θ
10	0.17365
20	0.34202
30	0.50000
40	0.64279
50	0.76604
60	0.86603
70	0.93969
80	0.98481

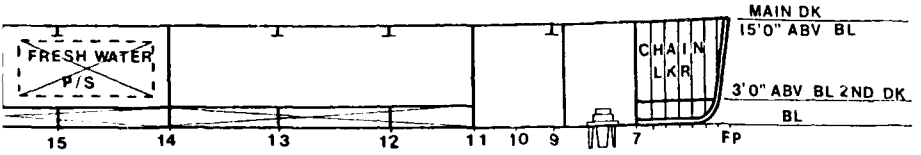
BASELINE

3500

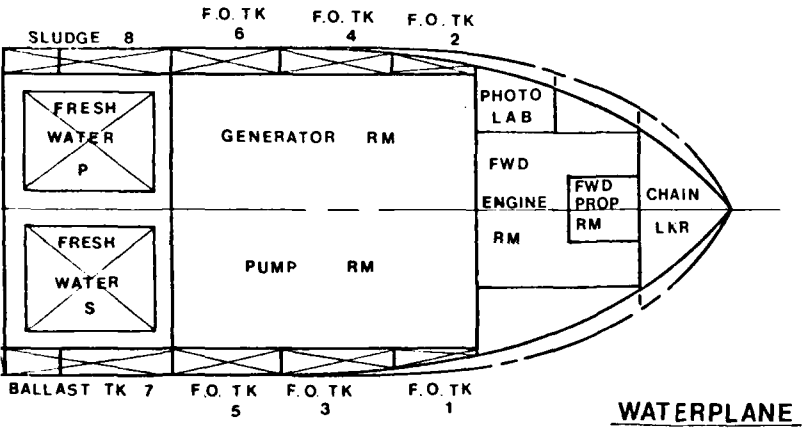

5 DEEP TK
ANTI-ROLL TK
ANTI-ROLL TK
FRESH WATER P/S
AP
27 26 25 24 23 22 21 20 19 18 17 16 15 14 13


F.O. TK 18
F.O. TK 16
F.O. TK 14
BALLAST TK 12
BALLAST TK 10
SLUDGE 8
F.O TK 6
7 DEEP TK
STORES
STORES
4 DEEP TK
2 DEEP TK
FRESH WATER P
GENER
8 DEEP TK
AFT PROPULSION RM
STORES
CABLE
STOWAGE
5 DEEP TK
ANTI-ROLL TK
CENTER WELL
ANTI-ROLL TK
6 DEEP TK
STORES
STORES
3 DEEP TK
1 DEEP TK
FRESH WATER S
PUM
F.O. TK 17
F.O. TK 15
F.O. TK 13
BALLAST TK 11
BALLAST TK 9
BALLAST TK 7
F.O. TK 5

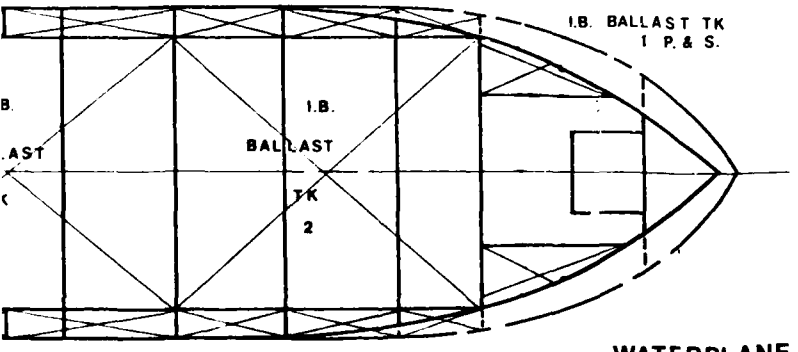

I.B. BALLAST TK 5
I.B. BALLAST TK 4
I.B. BALLAST TK 3
BAL



INBOARD PROFILE



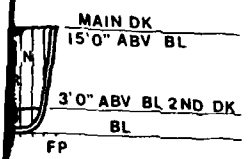
WATERPLANE
ABV 2ND DK



WATERPLANE
BELOW 2ND DK

OCEAN CONSTRUCTION PLA
"SEACON"

L.B.P.	26
BREADTH	4
DEPTH TO MAIN DECK	1



ARD PROFILE

OCEAN CONSTRUCTION PLATFORM "SEACON"

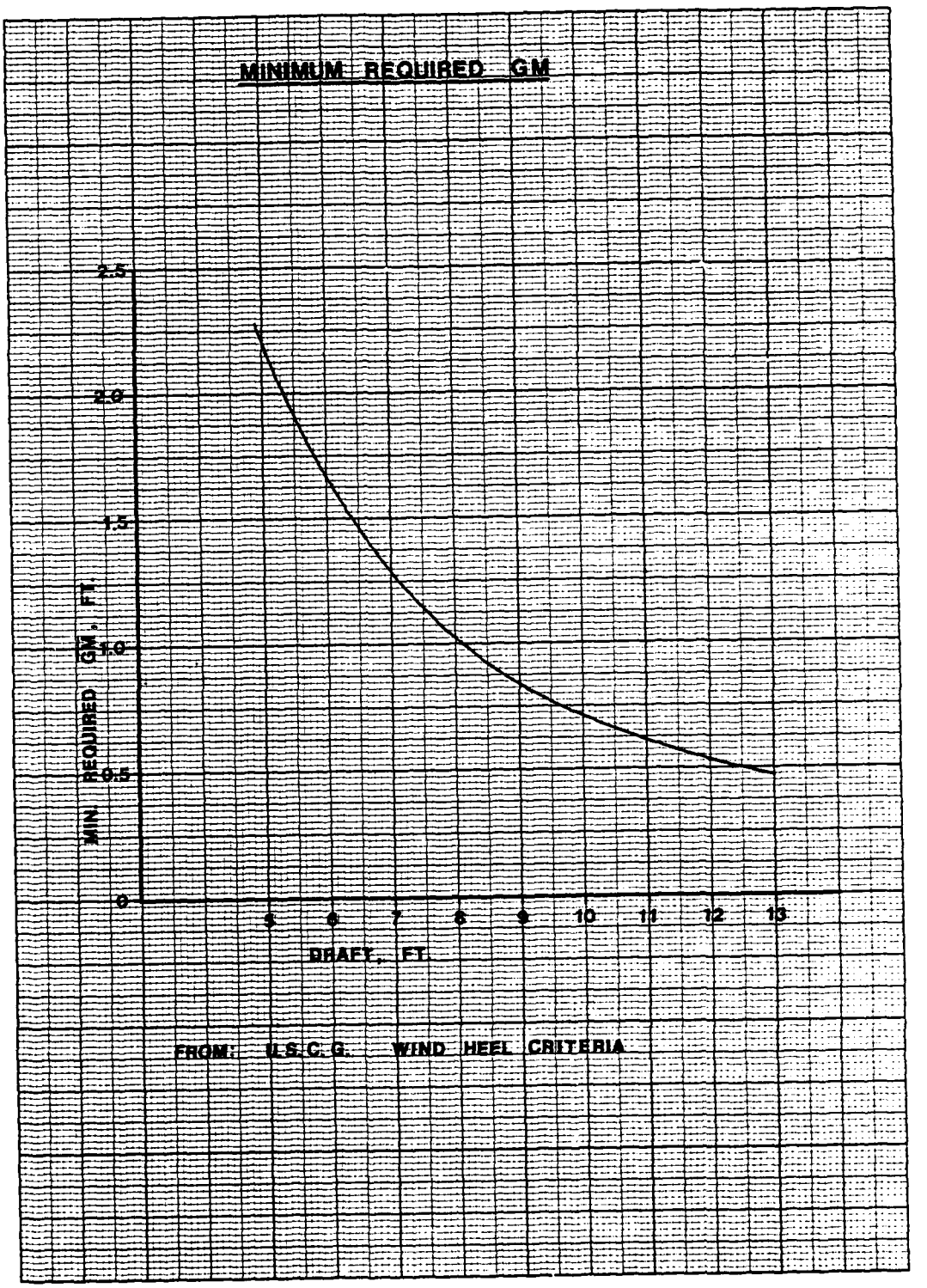
L.B.P.	260'0"
BREADTH	48'0"
DEPTH TO MAIN DECK	15'0"

IN
R

ERPLANE
2ND DK

T TK
. & S.

ERPLANE
OW 2ND DK



FROM: U.S.C.G. WIND HEEL CRITERIA

COMPARTMENT CAPACITIES

Ref. Line for L.C.G. F.P.
Ref. Line for V.C.G. B.L.

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

COMPARTMENT	FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM OF F. S. FT. TONS
Fuel Oil (98%)								
#1 Wing Tank (S)	11-12		11.3	9.80	111	44.0	497	1
#2 (P)	11-12		11.3	9.80	111	44.0	497	1
#3 (S)	12-13		19.3	7.64	147	58.0	1119	2
#4 (P)	12-13		19.3	7.64	147	58.0	1119	2
#5 (S)	13-14		21.0	7.64	160	74.0	1554	2
#6 (P)	13-14		21.0	7.64	160	74.0	1554	2
#13 (S)	20-21		21.0	7.64	160	186.0	3906	2
#14 (P)	20-21		12.8	6.28	80	188.6	2414	1
#15 (S)	21-22		21.0	7.60	160	202.0	4242	2
#16 (P)	21-22		21.0	7.60	160	202.0	4242	2
#17 (S)	22-23		14.7	7.64	112	216.0	3175	2
#18 (P)	22-23		14.7	7.64	112	216.0	3175	2
SUBTOTAL			208.4	7.78	1622	131.9	27496	21
Fresh water (100%)								
F.W. Tank (S)	15		56.3	8.25	464	94.0	5292	141
F.W. Tank (P)	15		56.3	8.25	464	94.0	5292	141
SUBTOTAL			112.6	8.25	928	94.0	10584	282
Lub. Oil								
Sludge Tank (100%)	14-15½		38.6	7.80	301	94.0	3628	4
S.W. Ballast (100%)								
#1 D.B. Tank	7-11		45.2	2.48	112	29.8	1347	1571
#2	11-14		148.0	1.55	229	60.0	8880	6150
#3	14-17		136.6	1.50	205	103.4	14124	7144
#4	17-20		136.6	1.50	205	156.6	21392	7144
#5	20-23		99.4	2.51	250	201.4	20019	6576
#7 Wing Tank (S)	14-15½		38.6	7.80	301	94.0	3623	4
#9 (S)	16-18		48.1	7.80	375	130.0	6253	5
#10 (P)	16-18		48.1	7.80	375	130.0	6253	5
#11 (S)	18½-20		38.6	7.80	301	166.0	6408	4

COMPARTMENT CAPACITIES CONT.

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

COMPARTMENT	FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM OF F. S. FT. TONS
#12 Wing Tank (P)	18½-20		38.6	7.80	301	166.0	6408	4
#1 Deep Tank (S)	16-17		64.5	9.00	581	122.0	7869	66
#2 (P)	16-17		64.5	9.00	581	122.0	7869	66
#3 (S)	17-18		64.5	9.00	581	138.0	8901	66
#4 (P)	17-18		64.5	9.00	581	138.0	8901	66
#5 (CL)	18½-20		329.1	9.00	2962	166.0	54631	3657
#6 (S)	23-27		83.3	10.00	833	232.1	19334	157
#7 (P)	23-27		83.3	10.00	833	232.1	19334	157
SUBTOTAL			1531.5	6.27	9606	144.66	221551	32842
Anti Roll Tanks (50%)								
FWD	15½-16		60.4	5.57	336	110.0	6644	2048
AFT	18-19½		60.4	5.57	336	150.0	9060	2048
SUBTOTAL			120.8	5.57	672	130.0	15704	4096
Anti Roll Tanks (100%)								
FWD	15½-16		120.8	8.61	1040	110.0	13288	2048
AFT	18-19½		120.8	8.61	1040	150.0	18120	2048
SUBTOTAL			241.6	8.61	2080	130.0	31408	4096

TRIM & STABILITY DUE TO CRANE LOADING AND POSITION

Trim as a function of for-and-aft position of the gantry crane can be read conveniently off the graphs on page 19. Please note that the forward draft mark is 10' aft of the F.P. and the aft draft mark is 50' forward of the A.P. The trim has been determined for 2 drafts, 8 and 11 feet. Trim at any other draft may be determined by interpolation. Following is an example:

The trim is desired at a 10 ft. draft with the crane at 50 feet aft of its stowed position.

From the 11 ft. mean draft graph:

Δ Draft Aft = .15 ft.

Δ Draft Fwd = - .22 ft.

From the 8 ft. mean draft graph:

Δ Draft Aft = .13 ft.

Δ Draft Fwd = - .20 ft.

Interpolating for 10 ft. draft:

$$\frac{11 - 8}{10 - 8} = \frac{.15 - .13}{(\Delta \text{ Draft Aft}) - .13}$$

Δ Draft Aft = .143 ft.

$$\frac{11 - 8}{10 - 8} = \frac{- .22 - (- .20)}{(\Delta \text{ Draft Fwd}) - .20}$$

Δ Draft Fwd = -.213 ft.

Therefore, the draft forward is:

10 + (- .213) = 9.787

and the draft aft is:

10 + .143 = 10.143 ft.

The effect on heel of a 10 ton load hanging from the crane over the side has been determined and can be viewed in the figure on page 20. The graph on the same page can be used to determine the heel angle if displacement and GM are known.

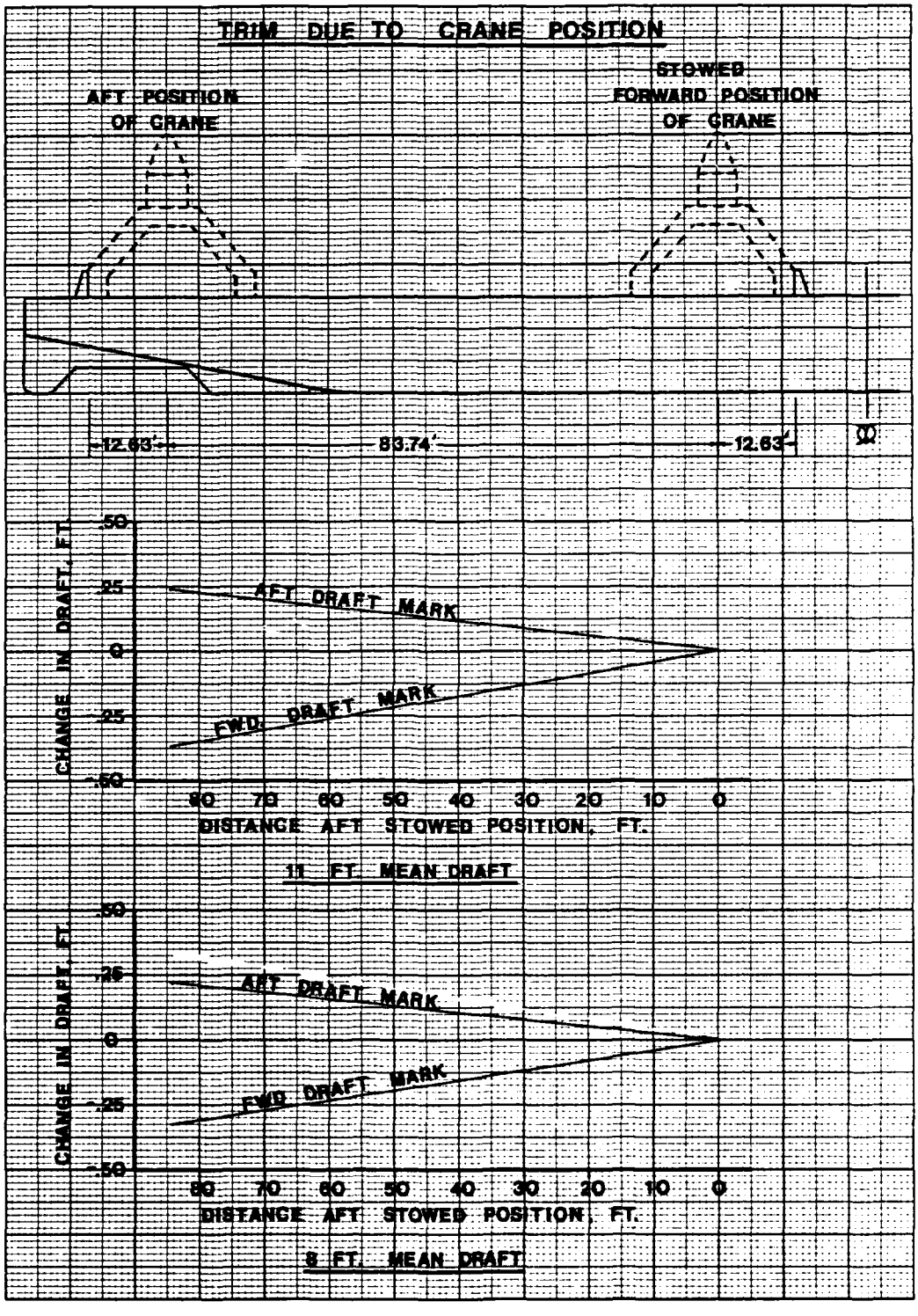
For example, for capacity condition:

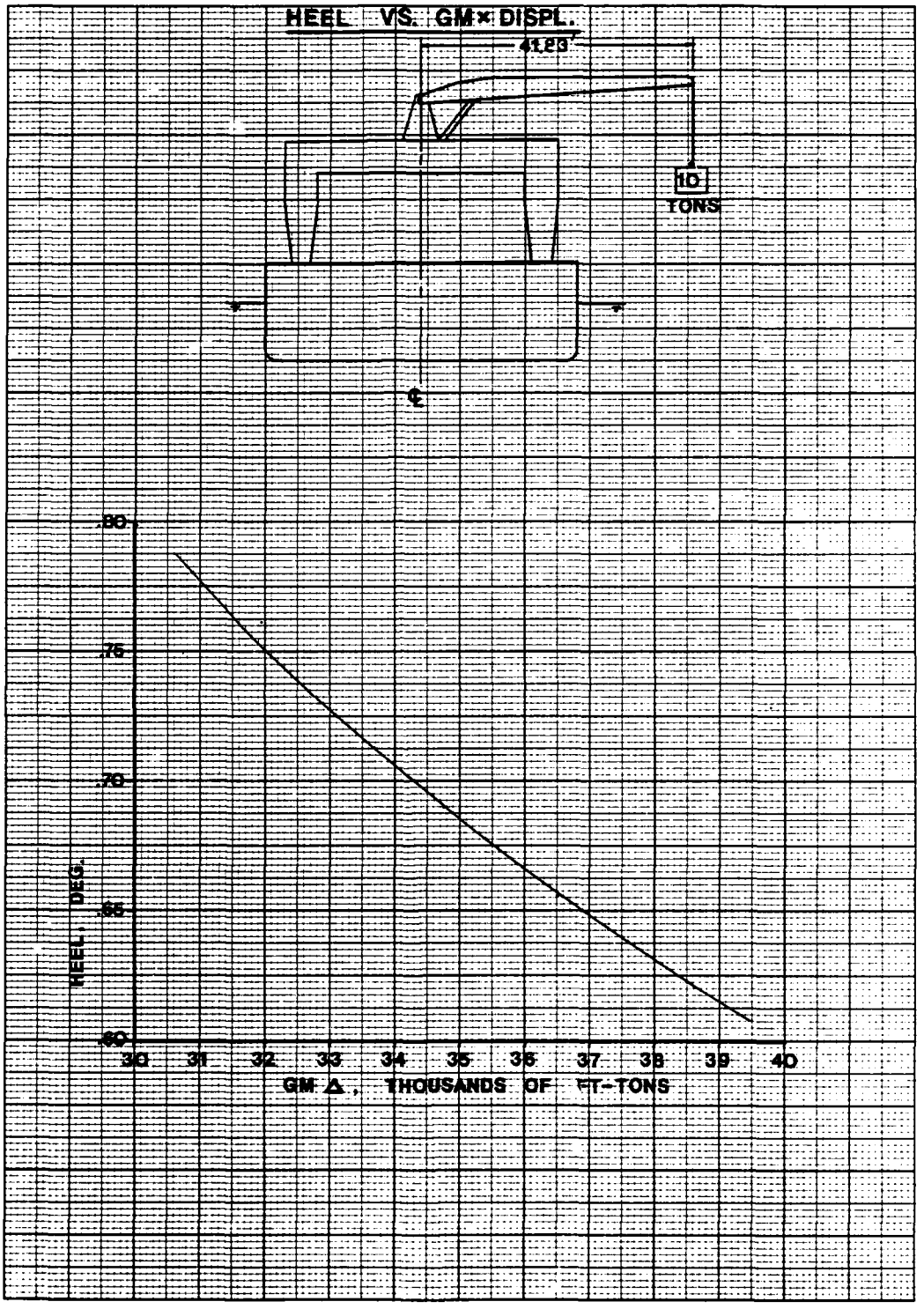
Displacement = 3462 tons

GM = 11.15 ft.

GM x Displacement = 38,601 ft. tons

and the corresponding angle of heel is 0.62 degrees.


TRIM DUE TO CRANE POSITION
AFT POSITION OF CRANE
STOWED FORWARD POSITION OF CRANE
-12.63'
83.74'
-12.63'
CHANGE IN DRAFT, FT.
.50
.25
0
-.25
-.50
AFT DRAFT MARK
FWD. DRAFT MARK
80 70 60 50 40 30 20 10 0
DISTANCE AFT STOWED POSITION, FT.
11 FT. MEAN DRAFT
8 FT. MEAN DRAFT


HEEL VS. GM × DISPL.
41.23'
10
TONS
℄
.80
.75
.70
.65
.60
HEEL, DEG.
30
31
32
33
34
35
36
37
38
39
40
GM Δ, THOUSANDS OF FT-TONS

SUMMARY OF CONDITIONS

CONDITION	DISPL. TONS	DRAFT FT.	GM FT.	TRIM FT.	S.W. BALLAST TONS	S.W. BALLAST %	FUEL OIL TONS	FUEL OIL %	FRESH WATER TONS	FRESH WATER %	SLUDGE TONS	DECK LOAD TONS	CRANE LOCATION FR.
LIGHT SHIP I	1338	5.15	26.80	0.24	–		–		–		–	–	18.5
LIGHT SHIP II	1459	5.57	21.90	0.26	–		–		–		–	–	18.5
CAPACITY	3462	12.16	11.15	1.30	1532	100	208	100	113	100	19	100	18.5
FULL LOAD	2414	8.78	13.24	0.11	464	30	208	100	113	100	19	100	18.5
OPERATING IA	2153	7.93	14.59	2.40	301	20	147	71	75	67	19	100	18.5
OPERATING IIA	2790	9.98	13.09	5.25	1080	71	105	50	75	67	19	–	22
OPERATING IIIA	2990	10.63	11.63	7.48	1080	71	105	50	75	67	19	200	18.5
OPERATING IB	2817	10.08	12.72	2.00	966	63	147	71	75	67	19	100	18.5
OPERATING IC	2650	9.54	12.38	1.33	799	52	147	71	75	67	19	100	18.5

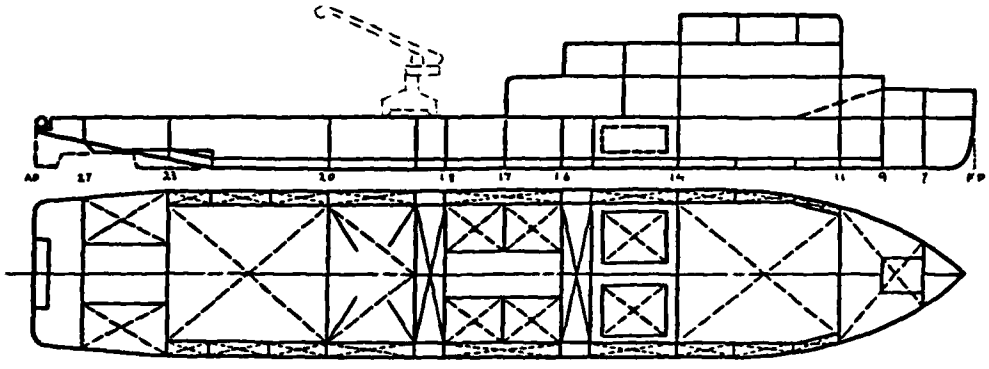
NOTE: LIGHT SHIP II INCLUDES ANTI-ROLL TANKS 50 % FULL.

TANKS ARE EMPTY IN LIGHT SHIP I.

TRIM & STABILITY SUMMARY

CONDITION OF VESSEL: LIGHT SHIP | DATE: 3/25/80 | PAGE: 22

CARGO _____ % CONSUMABLES _____ % BALLAST _____ | BY: _____ | JOB NO. _____



REF LINE FOR V.C.G. B.L. REF LINE FOR L.C.G. F.P.

SYMBOL	COMPARTMENT	CU FT TON	WEIGHT TONS	V.C.G. ADV. B.L FT.	MOMENT ADV. BL FT TONS	LCG ABT. FP FT	MOMENT ABT. EP FT TONS	VERT. MOM OF F.S. FT TONS
	Crew & Effects							
	Stores							
	Fuel Oil							
	Fresh Water							
	Sludge							
	S.W. Ballast							
	Anti Roll Tks							
	Cable Stowage							
	Deck Load							
	DEADWEIGHT							
	LIGHT SHIP		1338.2	15.5	20771	125.03	167313	
	DISPLACEMENT							

TRIM

DRAFT AT LCF = 5.15 FT

MOMENT TO ALTER TRIM 1" = 398.0 FT-TS

LCB AFT OF FP = 125.9 FT

LCG AFT OF FP = 125.03 FT

TRIMMING LEVER = 0.87 FT

TRIM (BY ~~STERN~~ HEAD) = 0.24 FT

LCF AFT OF FP = 130.56 FT

DRAFT AT FP = 5.59 FT AP = 4.72 FT

DRAFTS AT DRAFT MARKS

FWD 5.55 FT AFT 4.83 FT

STABILITY

METACENTRE ABOVE BL $\overline{KM}$ = 42.3 FT

CENTRE OF GRAVITY ABV BL $\overline{KG}$ = 15.5 FT

METACENTRIC HEIGHT $\overline{GM}$ = 26.8 FT

ALLOWANCE FOR FREE SURFACE = 0.0 FT

$\overline{GM}$ CORRECTED = 26.8 FT

$\overline{GM}$ REQUIRED = 2.11 FT

MOMENT TO HEEL 1° = 625.9 FT-TS

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

LIGHT SHIP I

COMPARTMENT LOADING

Ref. Line for L.C.G. F.P.

Ref. Line for V.C.G. B.L.

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

COMPARTMENT		FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM. OF F. S. FT. TONS
Fuel Oil									
#1 Wing Tank	(S)	11-12							
#2	(P)	11-12							
#3	(S)	12-13							
#4	(P)	12-13							
#5	(S)	13-14							
#6	(P)	13-14							
#13	(S)	20-21							
#14	(P)	20-21							
#15	(S)	21-22							
#16	(P)	21-22							
#17	(S)	22-23							
#18	(P)	22-23							
SUBTOTAL									
Fresh water									
F.W. Tank	(S)	15							
F.W. Tank	(P)	15							
SUBTOTAL									
Lub. Oil									
Sludge Tank		14-15½							
S.W. Ballast									
#1 D.B. Tank		7-11							
#2		11-14							
#3		14-17							
#4		17-20							
#5		20-23							
#7 Wing Tank	(S)	14-15½							
#9	(S)	16-18							
#10	(P)	16-18							
#11	(S)	18½-20							

LIGHT SHIP I

COMPARTMENT LOADING CONT.

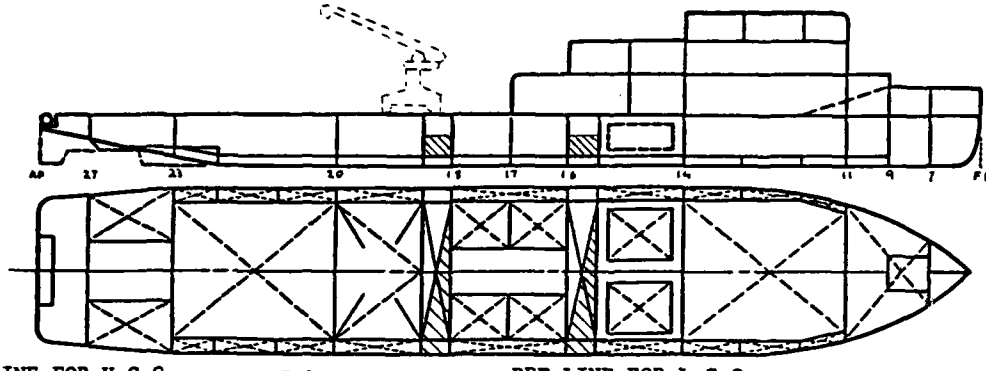
GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

COMPARTMENT	FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM. OF F. S. FT. TONS
#12 Wing Tank (P)	18½-20							
#1 Deep Tank (S)	16-17							
#2 (P)	16-17							
#3 (S)	17-18							
#4 (P)	17-18							
#5 (CL)	18½-20							
#6 (S)	23-27							
#7 (P)	23-27							
SUBTOTAL								
Anti Roll Tanks (50%)								
FWD	15½-16							
AFT	18-19½							
SUBTOTAL								
Anti Roll Tanks (100%)								
FWD	15½-16							
AFT	18-19½							
SUBTOTAL								

TRIM & STABILITY SUMMARY

CONDITION OF VESSEL: LIGHT SHIP II | DATE: 3/28/80 | PAGE: 24

CARGO _____ % CONSUMABLES _____ % BALLAST _____ | BY: _____ | JOB NO. _____



REF LINE FOR V.C.G. B.L. REF LINE FOR L.C.G. F.P.

SYMBOL	COMPARTMENT	CU FT TON	WEIGHT TONS	V.C.G. ADV.BL FT.	MOMENT ADV.BL FT TONS	LCG ABT.FP FT	MOMENT ABT. FP FT TONS	VERT.MOM OF F.S. FT TONS
	Crew & Effects							
	Stores							
	Fuel Oil							
	Fresh Water							
	Sludge							
	S.W. Ballast							
	Anti Roll Tks		120.8	5.6	677	130.0	15704	4096
	Cable Stowage							
	Deck Load							
DEADWEIGHT			120.8	5.6	677	130.0	15704	4096
LIGHT SHIP			1338.2	15.5	20771	125.03	167313	
DISPLACEMENT			1459.0	14.7	21447	125.44	183017	4096

TRIM

DRAFT AT LCF = 5.57 FT

MOMENT TO ALTER TRIM 1" = 408.0 FT-TS

LCB AFT OF FP = 126.32 FT

LCG AFT OF FP = 125.44 FT

TRIMMING LEVER = 0.88 FT

TRIM (BY ~~SPRING~~ HEAD) = 0.26 FT

LCF AFT OF FP = 131.27 FT

DRAFT AT FP = 5.70 FT AP = 5.44 FT

DRAFTS AT DRAFT MARKS

FWD 5.69 FT AFT 5.49 FT

STABILITY

METACENTRE ABOVE BL $\overline{KM}$ = 39.4 FT

CENTRE OF GRAVITY ABV BL $\overline{KG}$ = 14.7 FT

METACENTRIC HEIGHT $\overline{GM}$ = 24.7 FT

ALLOWANCE FOR FREE SURFACE = 2.80 FT

$\overline{GM}$ CORRECTED = 21.90 FT

$\overline{GM}$ REQUIRED = 1.88 FT

MOMENT TO HEEL 1° = 630.0 FT-TS

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

LIGHT SHIP II

COMPARTMENT LOADING

Ref. Line for L.C.G. F.P.
Ref. Line for V.C.G. B.L.

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

COMPARTMENT	FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM OF F. S. FT. TONS
Fuel Oil								
#1 Wing Tank (S)	11-12							
#2 (P)	11-12							
#3 (S)	12-13							
#4 (P)	12-13							
#5 (S)	13-14							
#6 (P)	13-14							
#13 (S)	20-21							
#14 (P)	20-21							
#15 (S)	21-22							
#16 (P)	21-22							
#17 (S)	22-23							
#18 (P)	22-23							
SUBTOTAL								
Fresh water								
F.W. Tank (S)	15							
F.W. Tank (P)	15							
SUBTOTAL								
Lub. Oil								
Sludge Tank	14-15½							
S.W. Ballast								
#1 D.B. Tank	7-11							
#2	11-14							
#3	14-17							
#4	17-20							
#5	20-23							
#7 Wing Tank (S)	14-15½							
#9 (S)	16-18							
#10 (P)	16-18							
#11 (S)	18½-20							

LIGHT SHIP II

COMPARTMENT LOADING CONT.

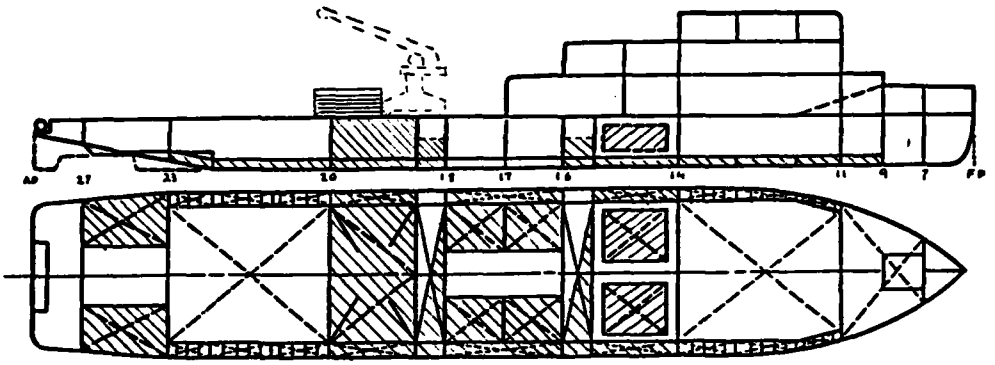
GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

COMPARTMENT	FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM OF F. S. FT. TONS
#12 Wing Tank (P)	18½-20							
#1 Deep Tank (S)	16-17							
#2 (P)	16-17							
#3 (S)	17-18							
#4 (P)	17-18							
#5 (CL)	18½-20							
#6 (S)	23-27							
#7 (P)	23-27							
SUBTOTAL								
Anti Roll Tanks (50%)								
FWD	15½-16		60.4	5.57	336	110.0	6644	2048
AFT	18-19½		60.4	5.57	336	150.0	9060	2048
SUBTOTAL			120.8	5.57	672	130.0	15704	4096
Anti Roll Tanks (100%)								
FWD	15½-16							
AFT	18-19½							
SUBTOTAL								

TRIM & STABILITY SUMMARY

CONDITION OF VESSEL: CAPACITY COND. | DATE: 3/28/80 | PAGE: 26

CARGO _____ % CONSUMABLES 100 % BALLAST _____ | BY: _____ | JOB NO. _____



REF LINE FOR V.C.G. B.L. REF LINE FOR L.C.G. F.P.

SYMBOL	COMPARTMENT	CU FT TON	WEIGHT TONS	V.C.G. ADV. B.L FT.	MOMENT ADV. BL FT TONS	LCG ABT. FP FT	MOMENT ABT. EP FT TONS	VERT. MOM OF F.S. FT TONS
	Crew & Effects		6.0	24.00	144	62.0	372	
	Stores		45.0	20.00	900	26.0	1170	
	Fuel Oil		208.4	7.78	1622	131.9	27496	21
	Fresh Water		112.6	8.25	928	94.0	10584	282
	Sludge		19.3	4.35	84	94.0	1814	4
	S.W. Ballast		1531.5	6.27	9606	144.7	221551	
	Anti Roll Tks		120.8	5.60	677	130.0	15704	4096
	Cable Stowage							
	Deck Load		100.0	19.00	1900	176.5	17650	
	DEADWEIGHT		2143.6		15861		296341	4403
	LIGHT SHIP		1338.2	15.5	20771	125.03	167313	
	DISPLACEMENT		3461.8	10.57	36632	133.94	463654	4403

TRIM

DRAFT AT LCF = 12.16 FT

MOMENT TO ALTER TRIM 1" = 516.4 FT-TS

LCB AFT OF FP = 131.61 FT

LCG AFT OF FP = 133.94 FT

TRIMMING LEVER = 2.33 FT

TRIM (BY STERN, ~~HEAD~~) = 1.30 FT

LCF AFT OF FP = 136.52 FT

DRAFT AT FP = 11.48 FT AP = 12.78 FT

DRAFTS AT DRAFT MARKS

FWD 11.59 FT AFT 12.53 FT

STABILITY

METACENTRE ABOVE BL $\overline{KM}$ = 23.0 FT

CENTRE OF GRAVITY ABV BL $\overline{KG}$ = 10.57 FT

METACENTRIC HEIGHT $\overline{GM}$ = 12.43 FT

ALLOWANCE FOR FREE SURFACE = 1.28 FT

$\overline{GM}$ CORRECTED = 11.15 FT

$\overline{GM}$ REQUIRED = 0.53 FT

MOMENT TO HEEL 1° = 673.6 FT-TS

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

CAPACITY COND.

COMPARTMENT LOADING

Ref. Line for L.C.G. F.P.

Ref. Line for V.C.G. B.L.

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

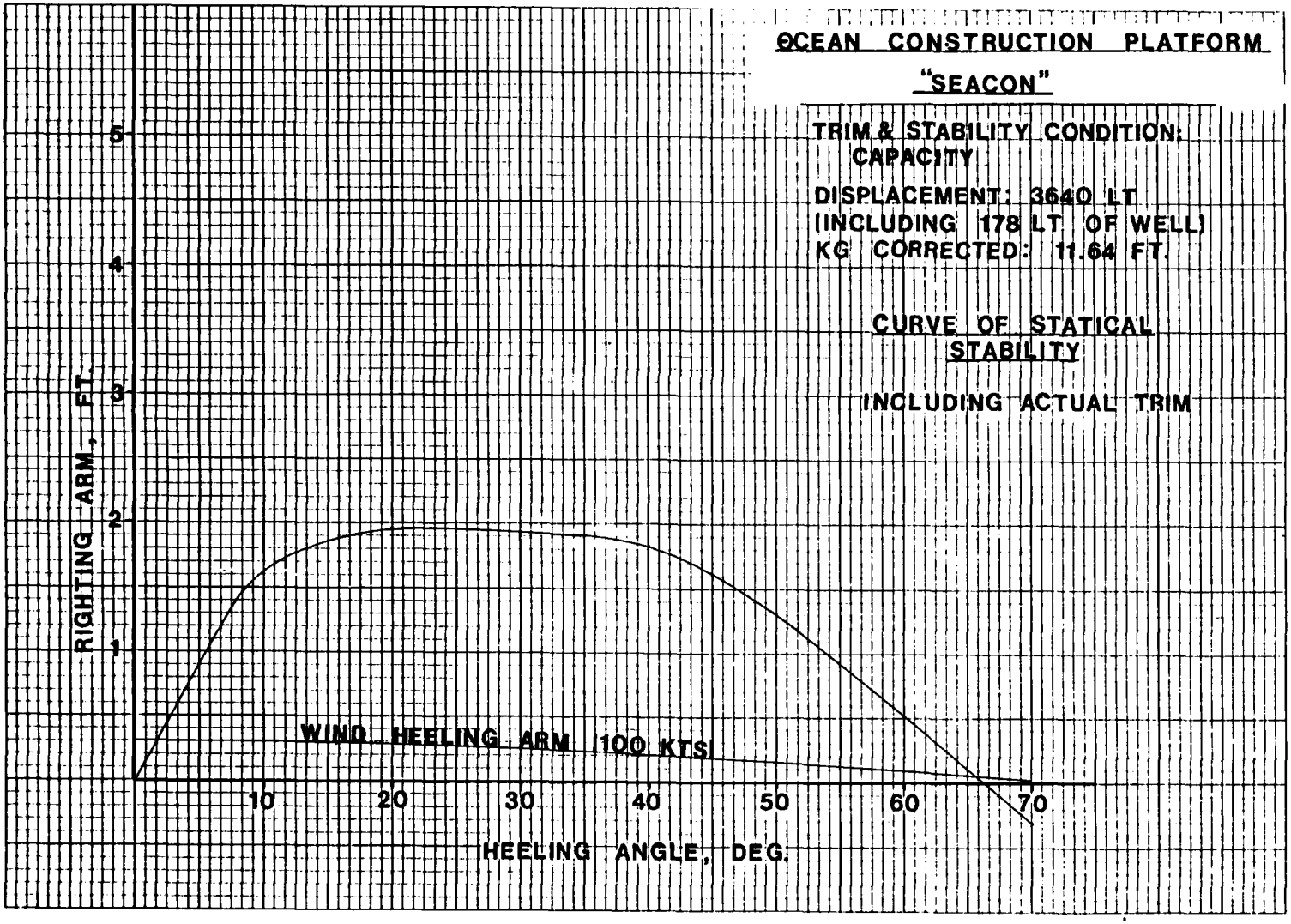
COMPARTMENT	FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV. BL FT.	MOMENT ABV. BL FT. TONS	L.C.G. ABT. F.P. FT.	MOMENT ABT. F.P. FT. TONS	VERT. MOM OF F. S. FT. TONS
Fuel Oil (98%)								
#1 Wing Tank (S)	11-12		11.3	9.80	111	44.0	497	1
#2 (P)	11-12		11.3	9.80	111	44.0	497	1
#3 (S)	12-13		19.3	7.64	147	58.0	1119	2
#4 (P)	12-13		19.3	7.64	147	58.0	1119	2
#5 (S)	13-14		21.0	7.64	160	74.0	1554	2
#6 (P)	13-14		21.0	7.64	160	74.0	1554	2
#13 (S)	20-21		21.0	7.64	160	186.0	3006	2
#14 (P)	20-21		12.8	6.28	80	188.6	2414	1
#15 (S)	21-22		21.0	7.60	160	202.0	4242	2
#16 (P)	21-22		21.0	7.60	160	202.0	4242	2
#17 (S)	22-23		14.7	7.64	112	216.0	3175	2
#18 (P)	22-23		14.7	7.64	112	216.0	3175	2
SUBTOTAL			208.4	7.78	1622	131.9	27496	21
Fresh water (100%)								
F.W. Tank (S)	15		56.3	8.25	464	94.0	5292	141
F.W. Tank (P)	15		56.3	8.25	464	94.0	5292	141
SUBTOTAL			112.6	8.25	928	94.0	10584	282
Lub. Oil (98%)								
Sludge Tank (50%)	14-15½		19.3	4.35	84	94.0	1814	4
S.W. Ballast (100%)								
#1 D.B. Tank	7-11		45.2	2.48	112	29.8	1347	
#2	11-14		148.0	1.55	229	60.0	8880	
#3	14-17		136.6	1.50	205	103.4	14124	
#4	17-20		136.6	1.50	205	156.6	21392	
#5	20-23		99.4	2.51	250	201.4	20019	
#7 Wing Tank (S)	14-15½		38.6	7.80	301	94.0	3628	
#9 (S)	16-18		48.1	7.80	375	130.0	6253	
#10 (P)	16-18		48.1	7.80	375	130.0	6253	
#11 (S)	18½-20		38.6	7.80	301	166.0	6408	

CAPACITY COND.

COMPARTMENT LOADING CONT.

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

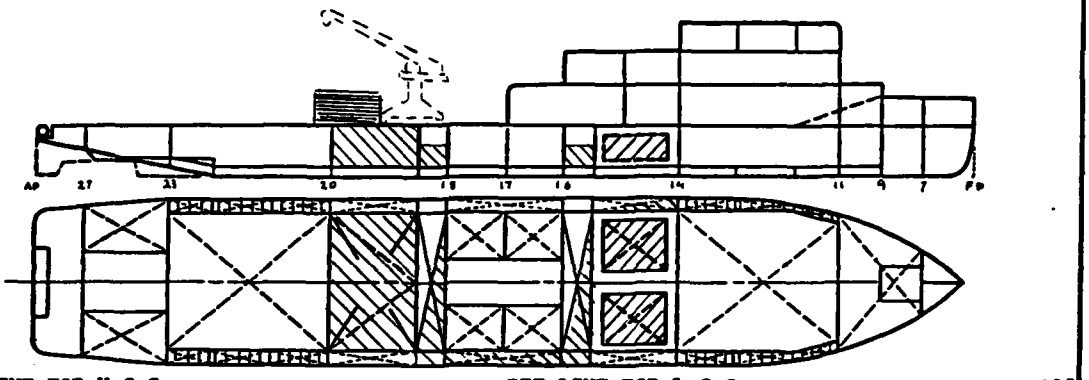
COMPARTMENT	FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM OF F. S. FT. TONS
#12 Wing Tank (P)	18½-20		38.6	7.80	301	166.0	6408	
#1 Deep Tank (S)	16-17		64.5	9.00	581	122.0	7869	
#2 (P)	16-17		64.5	9.00	581	122.0	7869	
#3 (S)	17-18		64.5	9.00	581	138.0	8901	
#4 (P)	17-18		64.5	9.00	581	138.0	8901	
#5 (CL)	18½-20		329.1	9.00	2962	166.0	54631	
#6 (S)	23-27		83.3	10.00	833	232.1	19334	
#7 (P)	23-27		83.3	10.00	833	232.1	19334	
SUBTOTAL			1531.5	6.27	9606	144.66	221551	
Anti Roll Tanks (50%)								
FWD	15½-16		60.4	5.57	336	110.0	6644	2048
AFT	18-19½		60.4	5.57	336	150.0	9060	2048
SUBTOTAL			120.8	5.57	672	130.0	15704	4096
Anti Roll Tanks (100%)								
FWD	15½-16							
AFT	18-19½							
SUBTOTAL								


OCEAN CONSTRUCTION PLATFORM
"SEACON"
TRIM & STABILITY CONDITION:
CAPACITY
DISPLACEMENT: 3640 LT
(INCLUDING 178 LT OF WELL)
KG CORRECTED: 11.64 FT.
CURVE OF STATICAL STABILITY
INCLUDING ACTUAL TRIM
RIGHTING ARM, FT.
5
4
3
2
1
WIND HEELING ARM (100 KTS)
10
20
30
40
50
60
70
HEELING ANGLE, DEG.

TRIM & STABILITY SUMMARY

CONDITION OF VESSEL: FULL LOAD | DATE: 3/28/80 | PAGE: 29

CARGO ____ % CONSUMABLES 100 % BALLAST 30 | BY: ____ | JOB NO. ____



REF LINE FOR V.C.G. B.L. REF LINE FOR L.C.G. F.P.

SYMBOL	COMPARTMENT	CU FT TON	WEIGHT TONS	V.C.G. ADV. B.L. FT.	MOMENT ADV. BL FT TONS	LCG ABT. FP FT	MOMENT ABT. FP FT TONS	VERT. MOM OF F.S. FT TONS
	Crew & Effects		6.0	24.00	144	62.0	372	
	Stores		45.0	20.00	900	26.0	1170	
	Fuel Oil		209.4	7.78	1622	131.9	27496	21
	Fresh Water		112.6	8.25	928	94.0	10584	282
	Sludge		19.3	4.35	84	94.0	1814	4
	S.W. Ballast		464	8.65	4013	152.5	70765	
	Anti Roll Tks		120.8	5.60	677	130.0	15704	4096
	Cable Stowage							
	Deck Load		100.0	19.00	1900	176.5	17650	
DEADWEIGHT			1076.1		10268		145555	4403
LIGHT SHIP			1338.2	15.5	20771	125.03	167313	
DISPLACEMENT			2414.3	12.84	31039	129.59	312868	4403

TRIM

DRAFT AT LCF	= 8.78	FT
MOMENT TO ALTER TRIM 1"	= 485.7	FT-TS
LCB AFT OF FP	= 129.33	FT
LCG AFT OF FP	= 129.59	FT
TRIMMING LEVER	= 0.26	FT
TRIM (BY STERN, ~~HEAD~~)	= 0.11	FT
LCF AFT OF FP	= 136.16	FT

DRAFT AT FP = 8.72 FT AP = 8.83 FT

DRAFTS AT DRAFT MARKS

FWD 8.73 FT AFT 8.81 FT

STABILITY

METACENTRE ABOVE BL	$\overline{KM}$ = 27.90	FT
CENTRE OF GRAVITY ABV BL	$\overline{KG}$ = 12.84	FT
METACENTRIC HEIGHT	$\overline{GM}$ = 15.06	FT
ALLOWANCE FOR FREE SURFACE	= 1.82	FT
$\overline{GM}$ CORRECTED	= 13.24	FT
$\overline{GM}$ REQUIRED	= 0.88	FT
MOMENT TO HEEL 1°	= 557.9	FT-TS

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

FULL LOAD

COMPARTMENT LOADING

Ref. Line for L.C.G. F.P.

Ref. Line for V.C.G. B.L.

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

COMPARTMENT	FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM. OF F. S. FT. TONS
Fuel Oil (98%)								
#1 Wing Tank (S)	11-12		11.3	9.80	111	44.0	497	1
#2 (P)	11-12		11.3	9.80	111	44.0	497	1
#3 (S)	12-13		19.3	7.64	147	58.0	1119	2
#4 (P)	12-13		19.3	7.64	147	58.0	1119	2
#5 (S)	13-14		21.0	7.64	160	74.0	1554	2
#6 (P)	13-14		21.0	7.64	160	74.0	1554	2
#13 (S)	20-21		21.0	7.64	160	186.0	3906	2
#14 (P)	20-21		12.8	6.28	80	188.6	2414	1
#15 (S)	21-22		21.0	7.60	160	202.0	4242	2
#16 (P)	21-22		21.0	7.60	160	202.0	4242	2
#17 (S)	22-23		14.7	7.64	112	216.0	3175	2
#18 (P)	22-23		14.7	7.64	112	216.0	3175	2
SUBTOTAL			208.4	7.78	1622	131.9	27496	21
Fresh water (100%)								
F.W. Tank (S)	15		56.3	8.25	464	94.0	5292	141
F.W. Tank (P)	15		56.3	8.25	464	94.0	5292	141
SUBTOTAL			112.6	8.25	928	94.0	10584	282
Lub. Oil								
Sludge Tank (50%)	14-15½		19.3	4.35	84	94.0	1814	4
S.W. Ballast								
#1 D.B. Tank	7-11							
#2	11-14							
#3	14-17							
#4	17-20							
#5	20-23							
#7 Wing Tank (S)	14-15½		38.6	7.80	301	94.0	3628	
#9 (S)	16-18		48.1	7.80	375	130.0	6253	
#10 (P)	16-18		48.1	7.80	375	130.0	6253	
#11 (S)	18½-20							

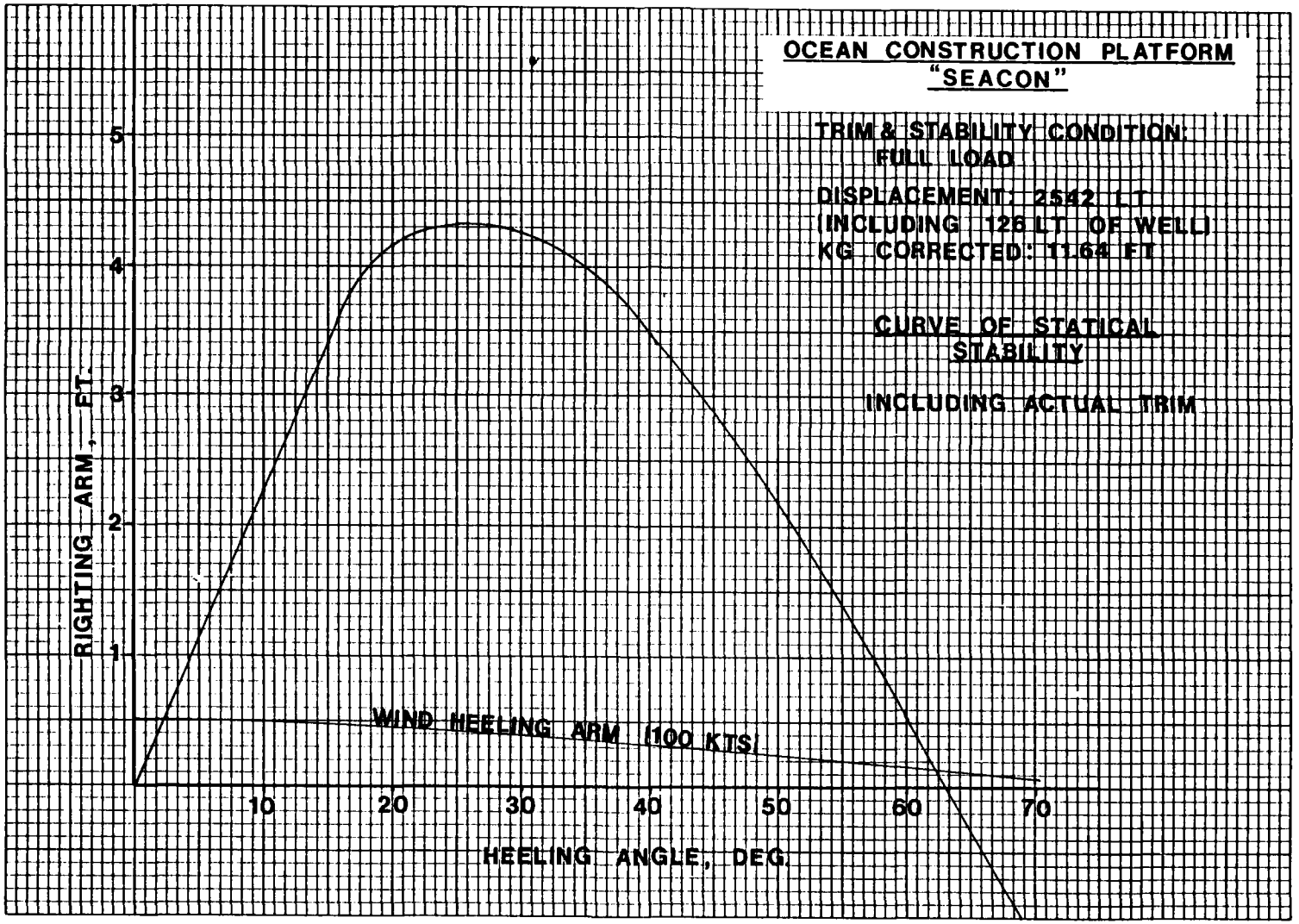
FULL LOAD

COMPARTMENT LOADING CONT.

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

COMPARTMENT	FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM OF F. S. FT. TONS
#12 Wing Tank (P)	18½-20							
#1 Deep Tank (S)	16-17							
#2 (P)	16-17							
#3 (S)	17-18							
#4 (P)	17-18							
#5 (CL)	18½-20		329.1	9.00	2962	166.0	54631	
#6 (S)	23-27							
#7 (P)	23-27							
SUBTOTAL			463.9	8.65	4013	152.5	70765	
Anti Roll Tanks (50%)								
FWD	15½-16		60.4	5.57	336	110.0	6644	2048
AFT	18-19½		60.4	5.57	336	150.0	9060	2048
SUBTOTAL			120.8	5.57	672	130.0	15704	4096
Anti Roll Tanks (100%)								
FWD	15½-16							
AFT	18-19½							
SUBTOTAL								

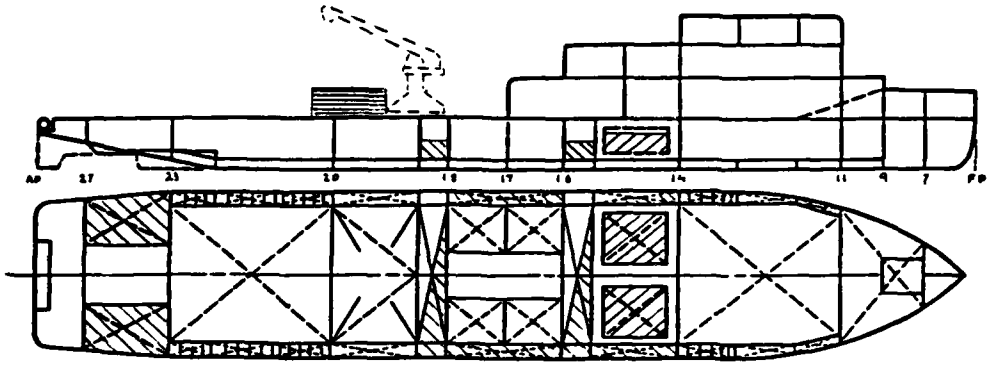
10 X 12 TO THE INCH • 7 X 10 INCHES
KEUFFEL & ESSER MADE IN U.S.A.



TRIM & STABILITY SUMMARY

CONDITION OF VESSEL: OPERATING 1A | DATE: 3/28/80 | PAGE: 32

CARGO ____ % CONSUMABLES 66 % BALLAST ____ | BY: ____ | JOB NO. ____



REF LINE FOR V.C.G. B.L. REF LINE FOR L.C.G. F.P.

SYMBOL	COMPARTMENT	CU FT TON	WEIGHT TONS	V.C.G. ADV. B.L FT.	MOMENT ADV. BL FT TONS	LCG ABT. FP FT	MOMENT ABT. FP FT TONS	VERT. MOM OF F.S. FT TONS
	Crew & Effects		6.0	24.00	144	62.0	372	
	Stores		45.0	20.00	900	26.0	1170	
	Fuel Oil		147.2	7.51	1104	164.3	24262	15
	Fresh Water		75.0	7.00	526	94.0	7050	282
	Sludge		19.3	4.35	84	94.0	1814	4
	S.W. Ballast		301.4	9.01	2717	181.8	54802	
	Anti Roll Tks		120.8	5.6	677	130.0	15704	4096
	Cable Stowage							
	Deck Load		100.0	19.0	1900	176.5	17650	
	DEADWEIGHT		814.7		8052		122324	4397
	LIGHT SHIP		1338.2	15.5	20771	125.03	167313	
	DISPLACEMENT		2152.9	13.37	28823	134.77	290137	4397

TRIM

DRAFT AT LCF	= 7.93	FT
MOMENT TO ALTER TRIM 1"	= 464.9	FT-TS
LCB AFT OF FP	= 128.56	FT
LCG AFT OF FP	= 134.77	FT
TRIMMING LEVER	= 6.21	FT
TRIM (BY STERN, ~~HEAD~~)	= 2.40	FT
LCF AFT OF FP	= 134.91	FT

DRAFT AT FP = 6.68 FT AP = 9.09 FT

DRAFTS AT DRAFT MARKS

FWD 6.87 FT AFT 8.62 FT

STABILITY

METACENTRE ABOVE BL	$\overline{KM}$ = 30.0	FT
CENTRE OF GRAVITY ABV BL	$\overline{KG}$ = 13.37	FT
METACENTRIC HEIGHT	$\overline{GM}$ = 16.63	FT
ALLOWANCE FOR FREE SURFACE	= 2.04	FT
$\overline{GM}$ CORRECTED	= 14.59	FT
$\overline{GM}$ REQUIRED	= 1.04	FT
MOMENT TO HEEL 1°	= 548.2	FT-TS

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

OPERATING 1A

COMPARTMENT LOADING

Ref. Line for L.C.G. F.P.

Ref. Line for V.C.G. B.L.

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

COMPARTMENT	FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM OF F. S. FT. TONS
Fuel Oil (65%)								
#1 Wing Tank (S)	11-12							
#2 (P)	11-12							
#3 (S)	12-13							
#4 (P)	12-13							
#5 (S)	13-14		21.0	7.64	160	74.0	1554	2
#6 (P)	13-14		21.0	7.64	160	74.0	1554	2
#13 (S)	20-21		21.0	7.64	160	186.0	3906	2
#14 (P)	20-21		12.8	6.82	80	188.6	2414	1
#15 (S)	21-22		21.0	7.60	160	202.0	4242	2
#16 (P)	21-22		21.0	7.60	160	202.0	4242	2
#17 (S)	22-23		14.7	7.64	112	216.0	3175	2
#18 (P)	22-23		14.7	7.64	112	216.0	3175	2
SUBTOTAL			147.2	7.51	1104	164.8	24262	15
Fresh water (66%)								
F.W. Tank (S)	15		37.5	7.00	263	94.0	3525	141
F.W. Tank (P)	15		37.5	7.00	263	94.0	3525	141
SUBTOTAL			75.0	7.00	526	94.0	7050	282
Lub. Oil								
Sludge Tank (50%)	14-15½		19.3	4.35	84	94.0	1814	4
S.W. Ballast								
#1 D.B. Tank	7-11							
#2	11-14							
#3	14-17							
#4	17-20							
#5	20-23							
#7 Wing Tank (S)	14-15½		38.6	7.81	301	94.0	3628	
#9 (S)	16-18		48.1	7.81	375	130.0	6253	
#10 (P)	16-18		48.1	7.81	375	130.0	6253	
#11 (S)	18½-20							

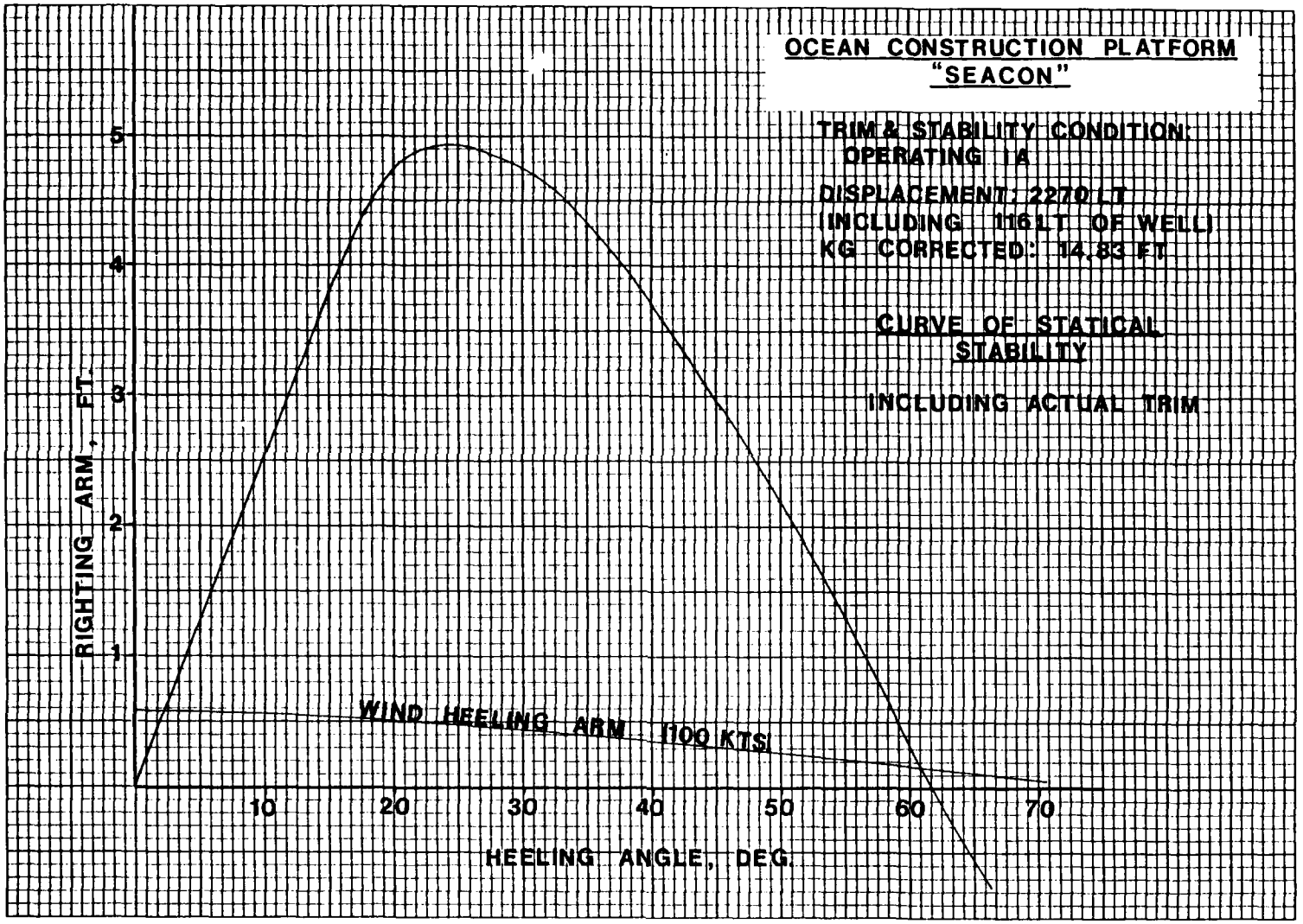
OPERATING 1A

COMPARTMENT LOADING CONT.

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

COMPARTMENT	FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM OF F. S. FT. TONS
#12 Wing Tank (P)	18½-20							
#1 Deep Tank (S)	16-17							
#2 (P)	16-17							
#3 (S)	17-18							
#4 (P)	17-18							
#5 (CL)	18½-20							
#6 (S)	23-27		83.3	10.00	833	232.1	19334	
#7 (P)	23-27		83.3	10.00	833	232.1	19334	
SUBTOTAL			301.4	9.01	2717	181.8	54802	
Anti Roll Tanks (50%)								
FWD	15½-16		60.4	5.57	336	110.0	6644	2048
AFT	18-19½		60.4	5.57	336	150.0	9060	2048
SUBTOTAL			120.8	5.57	672	130.0	15704	4096
Anti Roll Tanks (100%)								
FWD	15½-16							
AFT	18-19½							
SUBTOTAL								

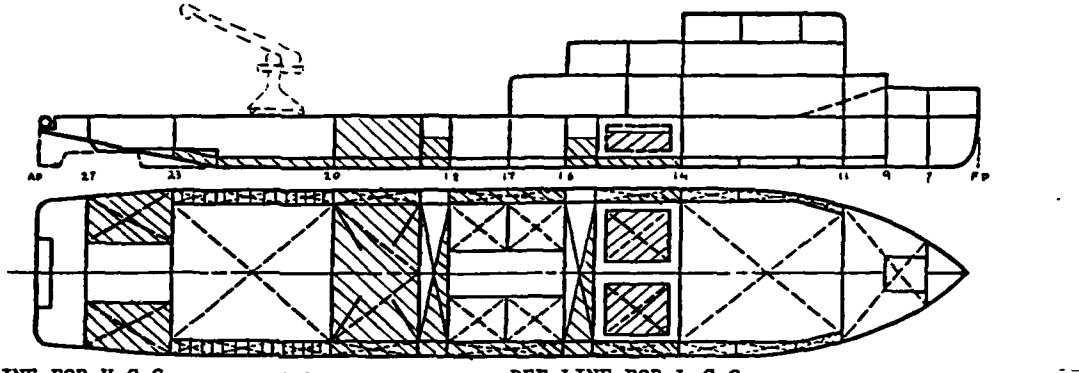
10 X 12 TO THE INCH
KE & ESS



TRIM & STABILITY SUMMARY

CONDITION OF VESSEL: OPERATING IA | DATE: 3/28/80 | PAGE: 35

CARGO ____ % CONSUMABLES 66 % BALLAST ____ | BY: ____ | JOB NO. ____



REF LINE FOR V.C.G. B.L. REF LINE FOR L.C.G. F.P.

SYMBOL	COMPARTMENT	CU FT TON	WEIGHT TONS	V.C.G. ADV. B.L. FT.	MOMENT ADV. BL FT TONS	LCG ABT. FP FT	MOMENT ABT. EP FT TONS	VERT. MOM OF F.S. FT TONS
	Crew & Effects		6.0	24.00	144	62.0	372	
	Stores		45.0	20.00	900	26.1	1170	
	Fuel Oil		105.2	7.45	784	201.1	21154	11
	Fresh Water		75.0	7.00	526	94.0	7050	282
	Sludge		19.3	4.35	84	94.0	1814	4
	S.W. Ballast		1080.3	6.43	6941	164.6	1778	
	Anti Roll Tks		1208	5.6	677	130.0	15704	4096
	Cable Stowage							
	Deck Load							
	Crane at FR 22						3070	
	DEADWEIGHT		1451.6		10074		228118	4393
	LIGHT SHIP		1338.2	15.5	20771	125.03	167313	
	DISPLACEMENT		2789.8	11.03	30845	141.78	395431	4393

TRIM

DRAFT AT LCF	= 9.98	FT
MOMENT TO ALTER TRIM 1"	= 506.4	FT-TS
LCB AFT OF FP	= 130.34	FT
LCG AFT OF FP	= 141.78	FT
TRIMMING LEVER	= 11.44	FT
TRIM (BY STERN. ~~HOGD~~)	= 5.25	FT
LCF AFT OF FP	= 137.01	FT

DRAFT AT FP = 7.22 FT AP = 12.47 FT

DRAFTS AT DRAFT MARKS

FWD 7.70 FT AFT 11.45 FT

STABILITY

METACENTRE ABOVE BL $\overline{KM}$	= 25.70	FT
CENTRE OF GRAVITY ABV BL $\overline{KG}$	= 11.03	FT
METACENTRIC HEIGHT $\overline{GM}$	= 14.67	FT
ALLOWANCE FOR FREE SURFACE	= 1.58	FT
$\overline{GM}$ CORRECTED	= 13.09	FT
$\overline{GM}$ REQUIRED	= 0.71	FT
MOMENT TO HEEL 1°	= 637.3	FT-TS

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

OPERATING IIA, IIIA

COMPARTMENT LOADING

Ref. Line for L.C.G. F.P.

Ref. Line for V.C.G. B.L.

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

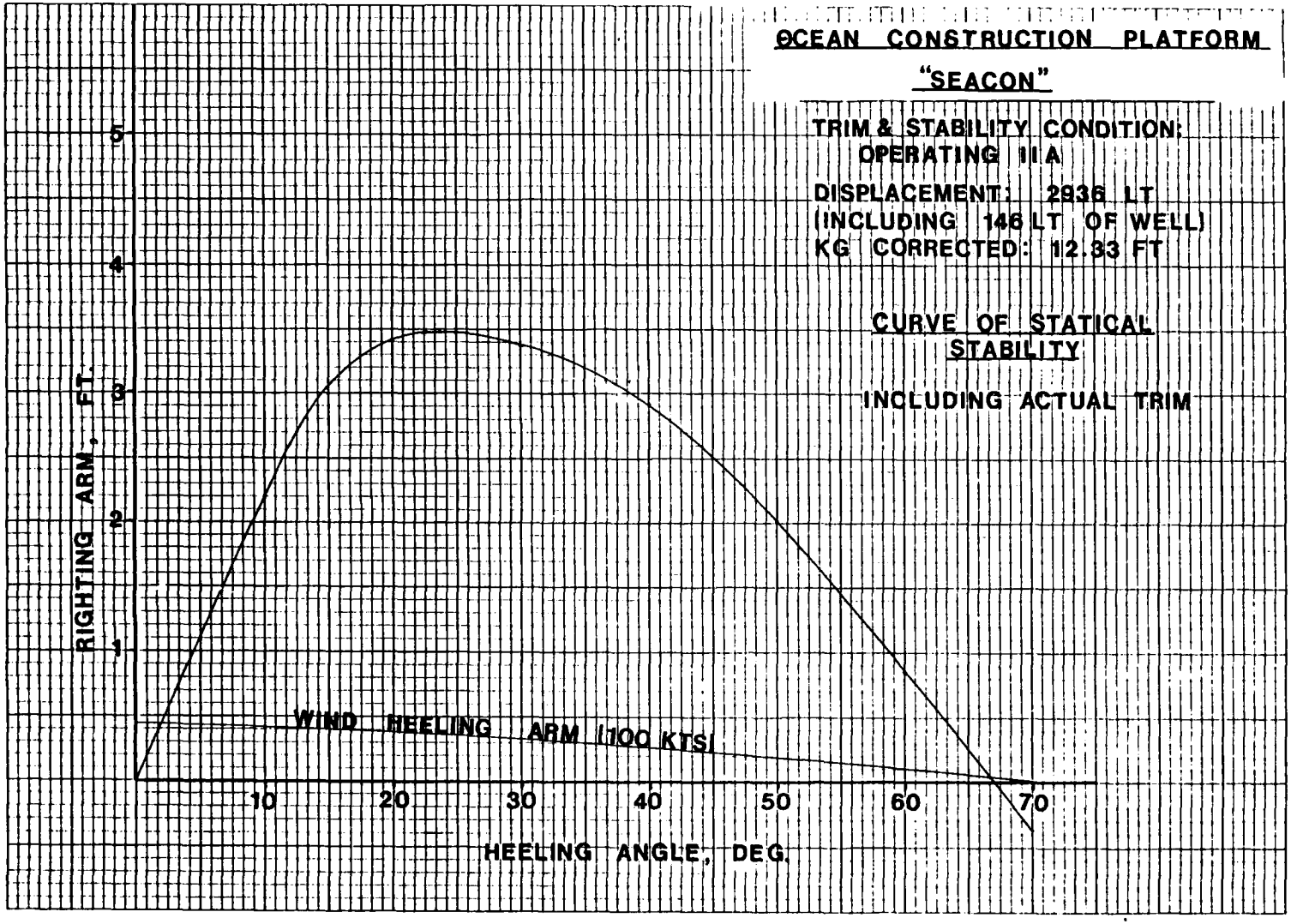
COMPARTMENT	FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM. OF F. S. FT. TONS
Fuel Oil (98%)								
#1 Wing Tank (S)	11-12							
#2 (P)	11-12							
#3 (S)	12-13							
#4 (P)	12-13							
#5 (S)	13-14							
#6 (P)	13-14							
#13 (S)	20-21		21.0	7.64	160	186.0	3906	2
#14 (P)	20-21		12.8	6.28	80	188.6	2414	1
#15 (S)	21-22		21.0	7.60	160	202.0	4242	2
#16 (P)	21-22		21.0	7.60	160	202.0	4242	2
#17 (S)	22-23		14.7	7.64	112	216.0	3175	2
#18 (P)	22-23		14.7	7.64	112	216.0	3175	2
SUBTOTAL			105.2	7.45	784	201.1	21154	11
Fresh water (66%)								
F.W. Tank (S)	15		37.5	7.00	263	94.0	3525	141
F.W. Tank (P)	15		37.5	7.00	263	94.0	3525	141
SUBTOTAL			75.0	7.00	526	94.0	7050	282
Lub. Oil								
Sludge Tank (50%)	14-15½		19.3	4.35	84	94.0	1814	4
S.W. Ballast								
#1 D.B. Tank	7-11							
#2	11-14							
#3	14-17		136.6	1.50	205	103.4	14124	
#4	17-20		136.6	1.50	205	156.6	21392	
#5	20-23		99.4	2.51	250	201.4	20019	
#7 Wing Tank (S)	14-15½		38.6	7.80	301	94.0	3628	
#9 (S)	16-18		48.1	7.80	375	130.0	6253	
#10 (P)	16-18		48.1	7.80	375	130.0	6253	
#11 (S)	18½-20		38.6	7.80	301	166.0	6408	

OPERATING IIA, IIIA

COMPARTMENT LOADING CONT.

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

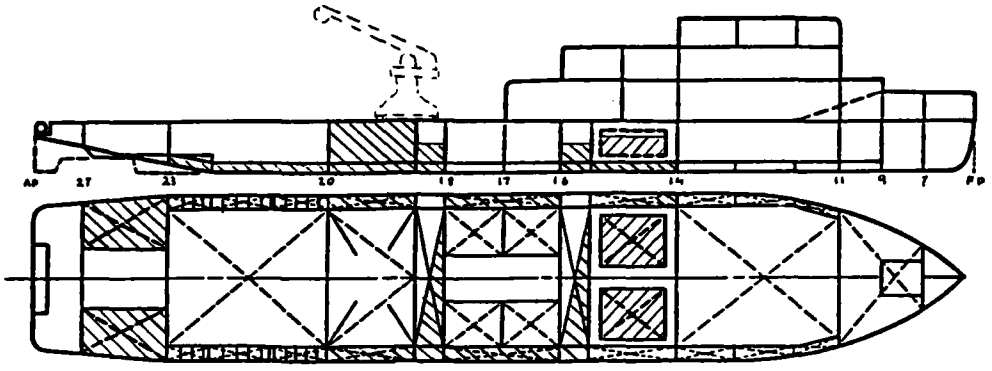
COMPARTMENT	FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM OF F. S. FT. TONS
#12 Wing Tank (P)	18½-20		38.6	7.80	301	166.0	6408	
#1 Deep Tank (S)	16-17							
#2 (P)	16-17							
#3 (S)	17-18							
#4 (P)	17-18							
#5 (CL)	18½-20		329.1	9.00	2962	166.0	54631	
#6 (S)	23-27		83.3	10.00	833	232.1	19334	
#7 (P)	23-27		833	10.00	833	232.1	19334	
SUBTOTAL			1080.3	6.43	6941	164.57	177784	
Anti Roll Tanks (50%)								
FWD	15½-16		60.4	5.57	336	110.0	6644	2048
AFT	18-19½		60.4	5.57	336	150.0	9060	2048
SUBTOTAL			120.8	5.57	672	130.0	15704	4096
Anti Roll Tanks (100%)								
FWD	15½-16							
AFT	18-19½							
SUBTOTAL								


OCEAN CONSTRUCTION PLATFORM
"SEACON"
TRIM & STABILITY CONDITION:
OPERATING II A
DISPLACEMENT: 2936 LT
(INCLUDING 146 LT OF WELL)
KG CORRECTED: 12.33 FT
CURVE OF STATICAL STABILITY
INCLUDING ACTUAL TRIM
RIGHTING ARM, FT.
WIND HEELING ARM (100 KTS)
10
20
30
40
50
60
70
HEELING ANGLE, DEG.

TRIM & STABILITY SUMMARY

CONDITION OF VESSEL: OPERATING III A | DATE: 3/28/80 | PAGE: 38

CARGO ____ % CONSUMABLES 66 % BALLAST ____ | BY: ____ | JOB NO. ____



REF LINE FOR V.C.G. B.L. REF LINE FOR L.C.G. F.P.

SYMBOL	COMPARTMENT	CU FT TON	WEIGHT TONS	V.C.G. ADV. B.L. FT.	MOMENT ADV. BL FT TONS	LCG ABT. FP FT	MOMENT ABT. FP FT TONS	VERT. MOM OF F.S. FT TONS
	Crew & Effects		6.0	24.0	144	62.0	372	
	Stores		45.0	20.0	900	26.1	1170	
	Fuel Oil		105.2	7.45	784	201.1	21154	11
	Fresh Water		75.0	7.00	526	94.0	7050	
	Sludge		19.3	4.35	84	94.0	1814	4
	S.W. Ballast		1080.3	6.43	6941	164.57	177784	
	Anti Roll Tks		120.8	5.6	677	130.0	15704	4096
	Cable Stowage							
	Deck Load							
	Buoy		200.0	21.00	4200	222.0	44400	
	DEADWEIGHT		1651.6		14256		269448	4393
	LIGHT SHIP		1338.2	15.5	20771	125.03	167313	
	DISPLACEMENT		2989.8	11.70	35027	146.09	436761	4393

TRIM

DRAFT AT LCF	= 10.63	FT
MOMENT TO ALTER TRIM 1"	= 510.02	FT-TS
LCB AFT OF FP	= 130.78	FT
LCG AFT OF FP	= 146.09	FT
TRIMMING LEVER	= 15.31	FT
TRIM (BY STERN, ~~HEAD~~)	= 7.48	FT
LCF AFT OF FP	= 137.05	FT

DRAFT AT FP = 6.69 FT AP = 14.18 FT

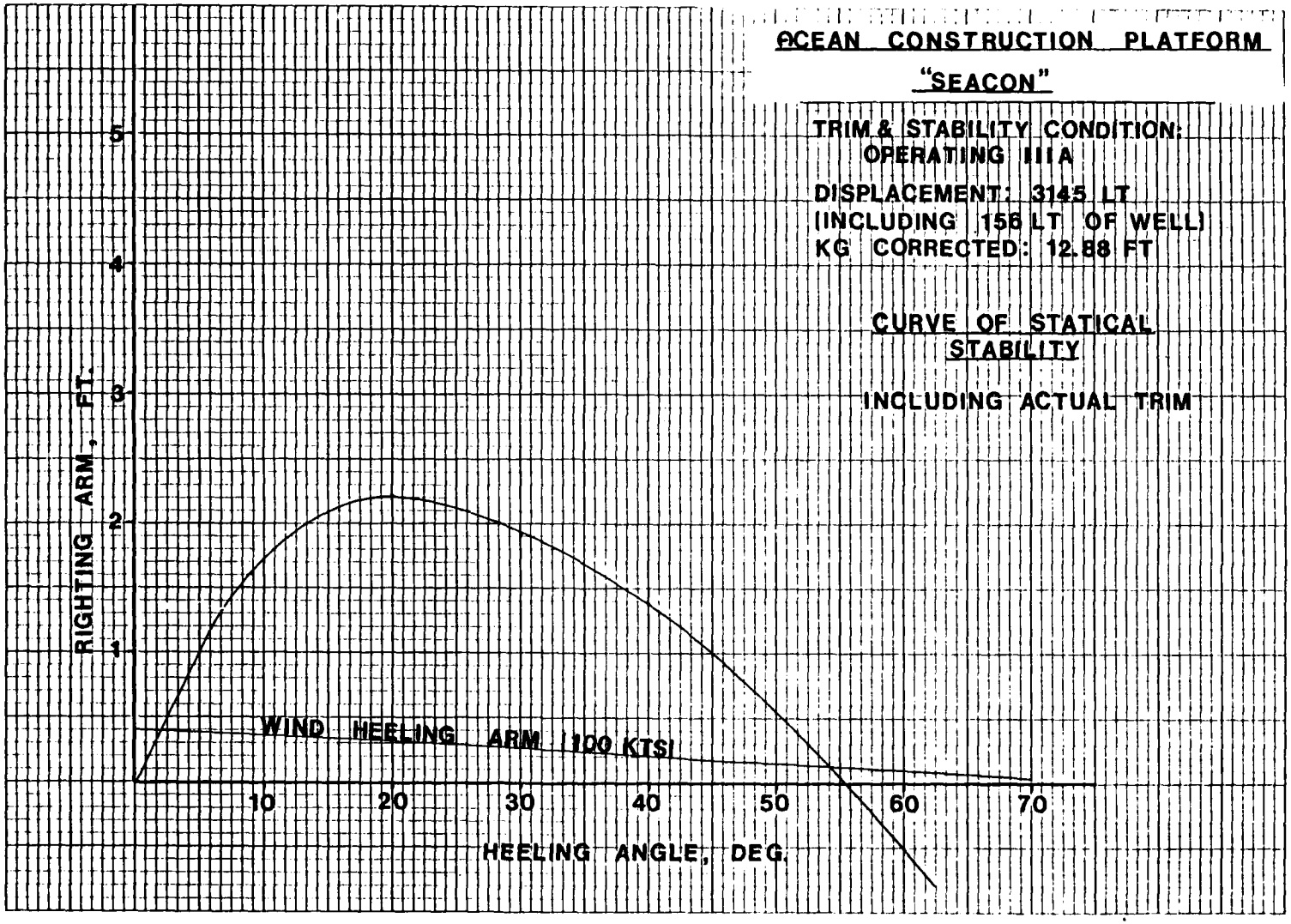
DRAFTS AT DRAFT MARKS

FWD 7.38 FT AFT 12.73 FT

STABILITY

METACENTRE ABOVE BL	$\overline{KM}$ = 24.8	FT
CENTRE OF GRAVITY ABV BL	$\overline{KG}$ = 11.70	FT
METACENTRIC HEIGHT	$\overline{GM}$ = 13.10	FT
ALLOWANCE FOR FREE SURFACE	= 1.47	FT
$\overline{GM}$ CORRECTED	= 11.63	FT
$\overline{GM}$ REQUIRED	= 0.65	FT
MOMENT TO HEEL 1°	= 606.8	FT-TS

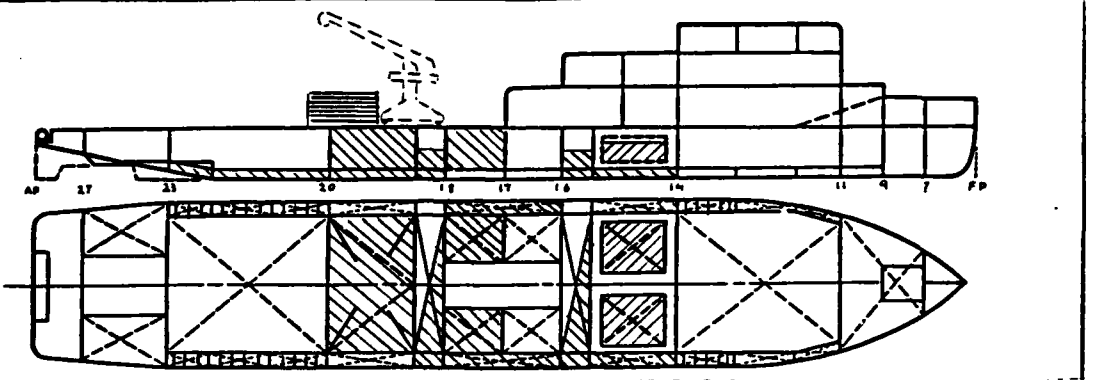
GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS


OCEAN CONSTRUCTION PLATFORM
"SEACON"
TRIM & STABILITY CONDITION:
OPERATING IIIA
DISPLACEMENT: 3145 LT
(INCLUDING 156 LT OF WELL)
KG CORRECTED: 12.88 FT
CURVE OF STATICAL STABILITY
INCLUDING ACTUAL TRIM
RIGHTING ARM, FT.
5
4
3
2
1
WIND HEELING ARM (100 KTS)
10
20
30
40
50
60
70
HEELING ANGLE, DEG.

TRIM & STABILITY SUMMARY

CONDITION OF VESSEL: OPERATING I B | DATE: 3/28/80 | PAGE: 40

CARGO ____ % CONSUMABLES 66 % BALLAST ____ | BY: ____ | JOB NO. ____



REF LINE FOR V.C.G. B.L. REF LINE FOR L.C.G. F.P.

SYMBOL	COMPARTMENT	CU FT TON	WEIGHT TONS	V.C.G. ADV.BL FT.	MOMENT ADV.BL FT TONS	LCG ABT.FP FT	MOMENT ABT. EP FT TONS	VERT.MOM OF F.S. FT TONS
	Crew & Effects		6.0	24.00	144	62.0	372	
	Stores		45.0	20.00	900	26.0	1170	
	Fuel Oil		147.0	7.51	1104	164.8	24262	15
	Fresh Water		75.0	7.00	526	94.0	7050	282
	Sludge		19.3	4.35	84	94.0	1814	4
	S.W. Ballast		966	6.04	5835	149.3	144102	
	Anti Roll Tks		120.8	5.6	677	130.0	15704	4096
	Cable Stowage							
	Deck Load		100.0	19.00	1900	176.5	17650	
	DEADWEIGHT		1479.1		11170		212124	4397
	LIGHT SHIP		1338.2	15.5	20771	125.03	167313	
	DISPLACEMENT		2817.3	11.32	31941	134.71	379437	4397

TRIM

DRAFT AT LCF = 10.08 FT

MOMENT TO ALTER TRIM 1" = 507.1 FT-TS

LCB AFT OF FP = 130.4 FT

LCG AFT OF FP = 134.71 FT

TRIMMING LEVER = 4.31 FT

TRIM (BY STERN, [illegible]) = 2.00 FT

LCF AFT OF FP = 137.03 FT

DRAFT AT FP = 9.03 FT AP = 11.03 FT

DRAFTS AT DRAFT MARKS

FWD 9.21 FT AFT 10.64 FT

STABILITY

METACENTRE ABOVE BL $\overline{KM}$ = 25.6 FT

CENTRE OF GRAVITY ABV BL $\overline{KG}$ = 11.32 FT

METACENTRIC HEIGHT $\overline{GM}$ = 14.28 FT

ALLOWANCE FOR FREE SURFACE = 1.56 FT

$\overline{GM}$ CORRECTED = 12.72 FT

$\overline{GM}$ REQUIRED = 0.70 FT

MOMENT TO HEEL 1° = 625.4 FT-TS

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

OPERATING I B

COMPARTMENT LOADING

Ref. Line for L.C.G. F.P.

Ref. Line for V.C.G. B.L.

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

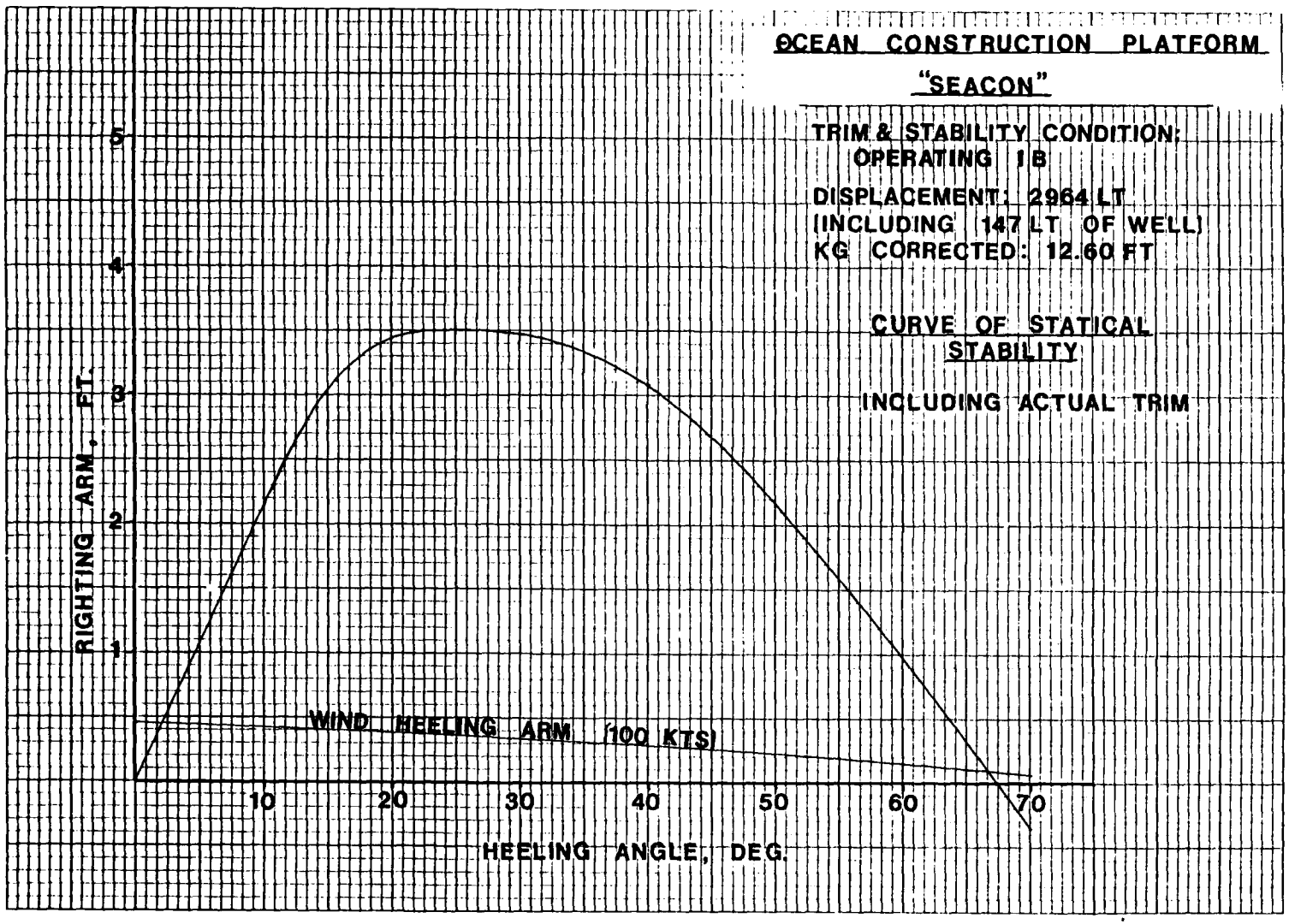
COMPARTMENT	FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM OF F. S. FT. TONS
Fuel Oil (65%)								
#1 Wing Tank (S)	11-12							
#2 (P)	11-12							
#3 (S)	12-13							
#4 (P)	12-13							
#5 (S)	13-14		21.0	7.64	160	74.0	1554	2
#6 (P)	13-14		21.0	7.64	160	74.0	1554	2
#13 (S)	20-21		21.0	7.64	160	186.0	3906	2
#14 (P)	20-21		12.8	6.28	80	188.6	2414	1
#15 (S)	21-22		21.0	7.60	160	202.0	4242	2
#16 (P)	21-22		21.0	7.60	160	202.0	4242	2
#17 (S)	22-23		14.7	7.64	112	216.0	3175	2
#18 (P)	22-23		14.7	7.64	112	216.0	3175	2
SUBTOTAL			147.2	7.51	1104	164.8	24262	15
Fresh water (66%)								
F.W. Tank (S)	15		37.5	7.00	263	94.0	3525	141
F.W. Tank (P)	15		37.5	7.00	263	94.0	3525	141
SUBTOTAL			75.0	7.00	526	94.0	7050	282
Lub. Oil								
Sludge Tank	14-15½		19.3	4.35	84	94.0	1814	4
S.W. Ballast								
#1 D.B. Tank	7-11							
#2	11-14							
#3	14-17		136.6	1.50	205	103.4	14124	
#4	17-20		136.6	1.50	205	156.6	21392	
#5	20-23		99.4	2.51	250	201.4	20019	
#7 Wing Tank (S)	14-15½		38.6	7.80	301	94.0	3628	
#9 (S)	16-18		48.1	7.80	375	130.0	6253	
#10 (P)	16-18		48.1	7.80	375	130.0	6253	
#11 (S)	18½-20							

OPERATING I B

COMPARTMENT LOADING CONT.

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

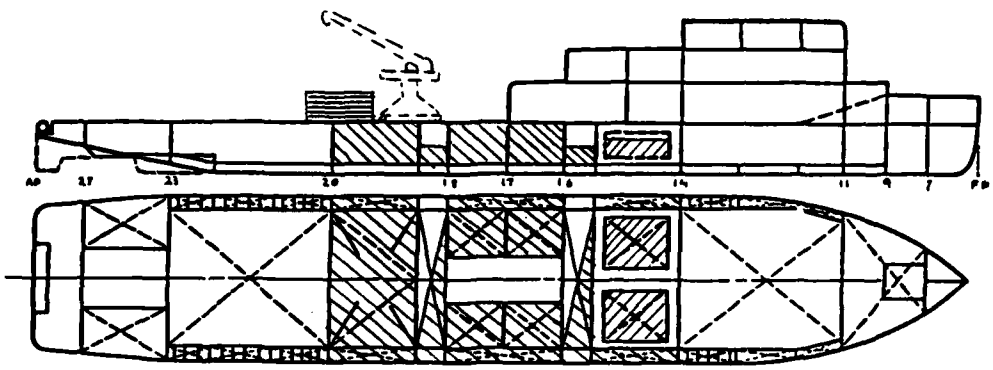
COMPARTMENT	FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM. OF F. S. FT. TONS
#12 Wing Tank (P)	18½-20							
#1 Deep Tank (S)	16-17							
#2 (P)	16-17							
#3 (S)	17-18		64.5	9.00	581	138.0	8901	
#4 (P)	17-18		64.5	9.00	581	138.0	8901	
#5 (CL)	18½-20		329.1	9.00	2962	166.0	54631	
#6 (S)	23-27							
#7 (P)	23-27							
SUBTOTAL			965.5	6.04	5835	149.25	144102	
Anti Roll Tanks (50%)								
FWD	15½-16		60.4	5.57	336	110.0	6644	2048
AFT	18-19½		60.4	5.57	336	150.0	9060	2048
SUBTOTAL			120.8	5.57	672	130.0	15704	4096
Anti Roll Tanks (100%)								
FWD	15½-16							
AFT	18-19½							
SUBTOTAL								


OCEAN CONSTRUCTION PLATFORM
"SEACON"
TRIM & STABILITY CONDITION:
OPERATING 1B
DISPLACEMENT: 2964 LT
(INCLUDING 147 LT OF WELL)
KG CORRECTED: 12.60 FT
CURVE OF STATICAL STABILITY
INCLUDING ACTUAL TRIM
RIGHTING ARM, FT.
5
4
3
2
1
WIND HEELING ARM (100 KTS)
10
20
30
40
50
60
70
HEELING ANGLE, DEG.

TRIM & STABILITY SUMMARY

CONDITION OF VESSEL: OPERATING IC | DATE: 3/28/80 | PAGE: 43

CARGO ____ % CONSUMABLES 66 % BALLAST ____ | BY: ____ | JOB NO. ____



REF LINE FOR V.C.G. B.L. REF LINE FOR L.C.G. F.P.

SYMBOL	COMPARTMENT	CU FT TON	WEIGHT TONS	V.C.G. ADV. B L FT.	MOMENT ADV. BL FT TONS	LCG ABT. FP FT	MOMENT ABT. EP FT TONS	VERT. MOM OF F.S. FT TONS
	Crew & Effects		6.0	24.00	144	62.0	372	
	Stores		45.0	20.00	900	26.0	1170	
	Fuel Oil		147.0	7.51	1104	164.8	24262	15
	Fresh Water		75.0	7.00	526	94.0	7050	282
	Sludge		19.3	4.35	84	94.0	1814	4
	S.W. Ballast		799.0	8.68	6939	146.6	117121	
	Anti Roll Tks		120.8	5.60	677	130.0	15704	4096
	Cable Stowage							
	Deck Load		100.0	19.00	1900	176.5	17650	
DEADWEIGHT			1312.1		12274		185143	4397
LIGHT SHIP			1338.2	15.5	20771	125.03	167313	
DISPLACEMENT			2650.3	12.46	33045	133.01	352456	4397

TRIM

DRAFT AT LCF = 9.54 FT

MOMENT TO ALTER TRIM 1" = 501.6 FT-TS

LCB AFT OF FP = 130.00 FT

LCG AFT OF FP = 133.01 FT

TRIMMING LEVER = 3.01 FT

TRIM (BY STERN, ~~HEAD~~) = 1.33 FT

LCF AFT OF FP = 136.86 FT

DRAFT AT FP = 8.84 FT AP = 10.17 FT

DRAFTS AT DRAFT MARKS

FWD 8.96 FT AFT 9.91 FT

STABILITY

METACENTRE ABOVE BL $\overline{KM}$ = 26.5 FT

CENTRE OF GRAVITY ABV BL $\overline{KG}$ = 12.46 FT

METACENTRIC HEIGHT $\overline{GM}$ = 14.04 FT

ALLOWANCE FOR FREE SURFACE = 1.66 FT

$\overline{GM}$ CORRECTED = 12.38 FT

$\overline{GM}$ REQUIRED = 0.76 FT

MOMENT TO HEEL 1° = 572.6 FT-TS

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

OPERATING IC

COMPARTMENT LOADING

Ref. Line for L.C.G. F.P.

Ref. Line for V.C.G. B.L.

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

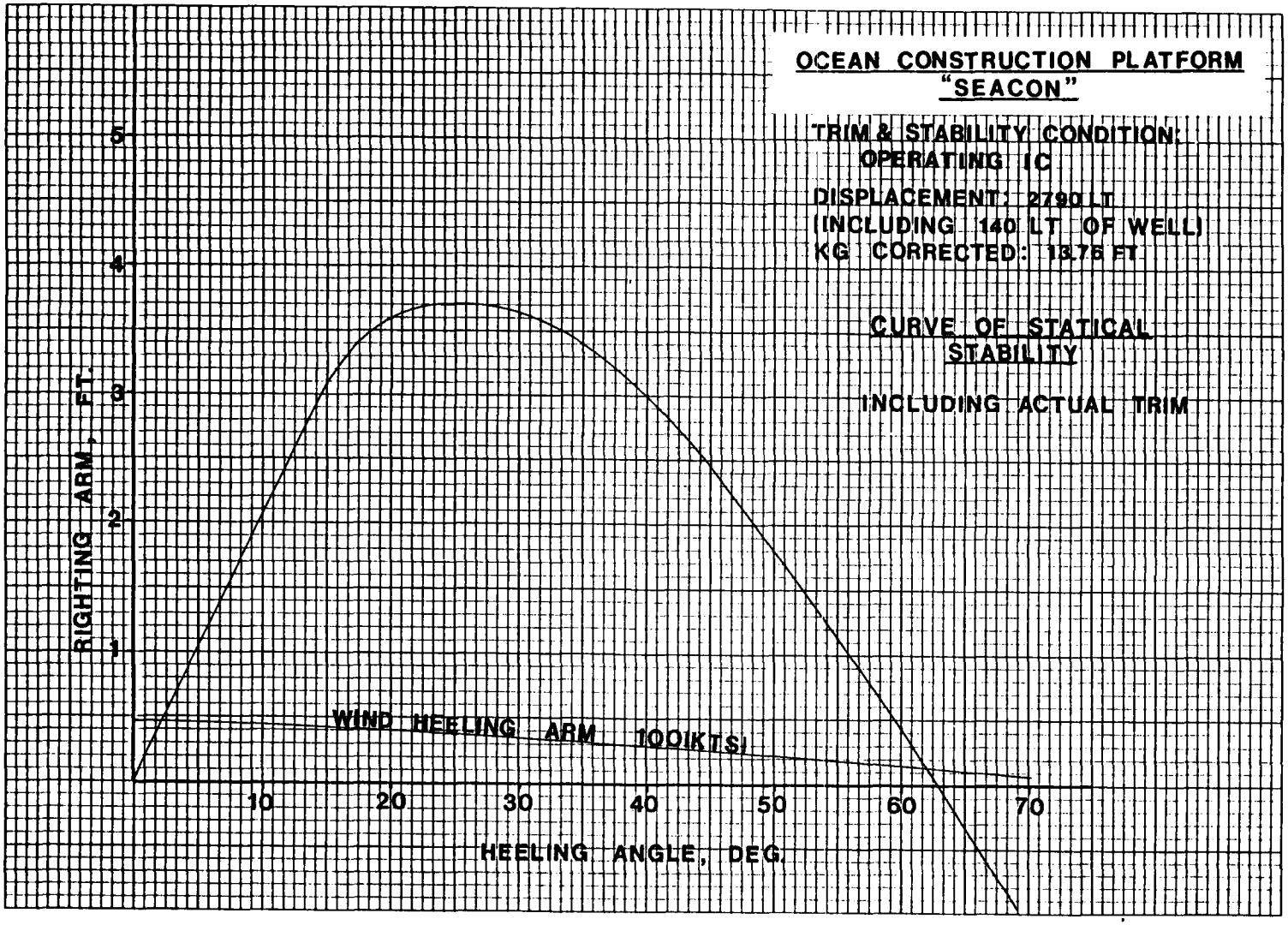
COMPARTMENT	FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM OF F. S. FT. TONS
Fuel Oil (65%)								
#1 Wing Tank (S)	11-12							
#2 (P)	11-12							
#3 (S)	12-13							
#4 (P)	12-13							
#5 (S)	13-14		21.0	7.64	160	74.0	1554	2
#6 (P)	13-14		21.0	7.64	160	74.0	1554	2
#13 (S)	20-21		21.0	7.64	160	186.0	3906	2
#14 (P)	20-21		12.8	6.28	80	188.6	2414	1
#15 (S)	21-22		21.0	7.60	160	202.0	4242	2
#16 (P)	21-22		21.0	7.60	160	202.0	4242	2
#17 (S)	22-23		14.7	7.64	112	216.0	3175	2
#18 (P)	22-23		14.7	7.64	112	216.0	3175	2
SUBTOTAL			147.2	7.51	1104	164.8	24262	15
Fresh water (66%)								
F.W. Tank (S)	15		37.5	7.00	263	94.0	3525	141
F.W. Tank (P)	15		37.5	7.00	263	94.0	3525	141
SUBTOTAL			75.0	7.00	526	94.0	70	282
Lub. Oil								
Sludge Tank	14-15½		19.3	4.35	84	94.0	1314	4
S.W. Ballast								
#1 D.B. Tank	7-11							
#2	11-14							
#3	14-17							
#4	17-20							
#5	20-23							
#7 Wing Tank (S)	14-15½		38.6	7.80	301	94.0	3628	
#9 (S)	16-18		48.1	7.80	375	130.0	6253	
#10 (P)	16-18		48.1	7.80	375	130.0	6253	
#11 (S)	18½-20		38.6	7.80	301	166.0	6408	

OPERATING IC

COMPARTMENT LOADING CONT.

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

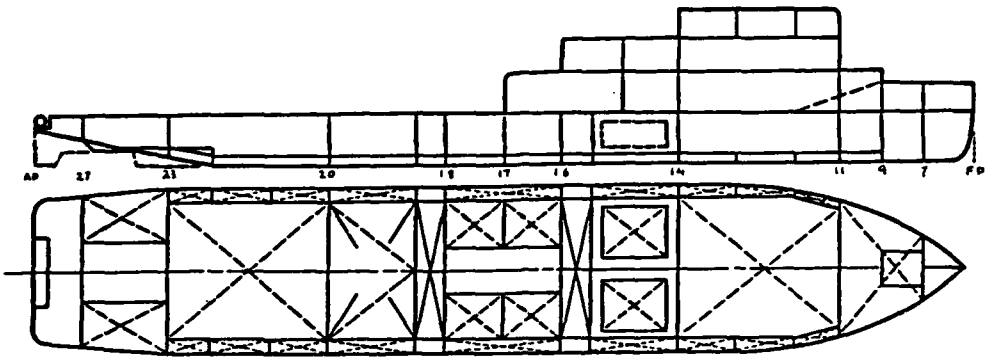
COMPARTMENT	FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM OF F. S. FT. TONS
#12 Wing Tank (P)	18½-20		38.6	7.80	301	166.0	6408	
#1 Deep Tank (S)	16-17		64.5	9.00	581	122.0	7869	
#2 (P)	16-17		64.5	9.00	581	122.0	7869	
#3 (S)	17-18		64.5	9.00	581	138.0	8901	
#4 (P)	17-18		64.5	9.00	581	138.0	8901	
#5 (CL)	18½-20		329.1	9.00	2962	166.0	54631	
#6 (S)	23-27							
#7 (P)	23-27							
SUBTOTAL			799.1	8.68	6939	146.57	117121	
Anti Roll Tanks (50%)								
FWD	15½-16		60.4	5.57	336	110.0	6644	2048
AFT	18-19½		60.4	5.57	336	150.0	9060	2048
SUBTOTAL			120.8	5.57	672	130.0	15704	4096
Anti Roll Tanks (100%)								
FWD	15½-16							
AFT	18-19½							
SUBTOTAL								


OCEAN CONSTRUCTION PLATFORM
"SEACON"
TRIM & STABILITY CONDITION:
OPERATING IC
DISPLACEMENT: 2790 LT
(INCLUDING 140 LT OF WELL)
KG CORRECTED: 13.75 FT
CURVE OF STATICAL STABILITY
INCLUDING ACTUAL TRIM
RIGHTING ARM, FT.
5
4
3
2
1
WIND HEELING ARM 100KTS)
10
20
30
40
50
60
70
HEELING ANGLE, DEG.

TRIM & STABILITY SUMMARY

CONDITION OF VESSEL: _____ DATE: _____ PAGE: 46

CARGO _____ % CONSUMABLES _____ % BALLAST _____ BY: _____ JOB NO. _____



REF LINE FOR V.C.G. B.L. REF LINE FOR L.C.G. F.P.

SYMBOL	COMPARTMENT	CU FT TON	WEIGHT TONS	V.C.G. ADV. B.L. FT.	MOMENT ADV. BL FT TONS	LCG ABT. FP FT	MOMENT ABT. EP FT TONS	VERT. MOM OF F.S. FT TONS
	Crew & Effects							
	Stores							
	Fuel Oil							
	Fresh Water							
	Sludge							
	S.W. Ballast							
	Anti Roll Tks							
	Cable Stowage							
	Deck Load							
	DEADWEIGHT							
	LIGHT SHIP		1338.2	15.5	20771	125.03	167313	
	DISPLACEMENT							

TRIM

DRAFT AT LCF = _____ FT

MOMENT TO ALTER TRIM 1" = _____ FT-TS

LCB AFT OF FP = _____ FT

LCG AFT OF FP = _____ FT

TRIMMING LEVER = _____ FT

TRIM (BY STERN, HEAD) = _____ FT

LCF AFT OF FP = _____ FT

DRAFT AT FP = _____ FT AP = _____ FT

DRAFTS AT DRAFT MARKS

FWD _____ FT AFT _____ FT

STABILITY

METACENTRE ABOVE BL $\overline{KM}$ = _____ FT

CENTRE OF GRAVITY ABV BL $\overline{KG}$ = _____ FT

METACENTRIC HEIGHT $\overline{GM}$ = _____ FT

ALLOWANCE FOR FREE SURFACE = _____ FT

$\overline{GM}$ CORRECTED = _____ FT

$\overline{GM}$ REQUIRED = _____ FT

MOMENT TO HEEL 1° = _____ FT-TS

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

COMPARTMENT LOADING

Ref. Line for L.C.G._____
Ref. Line for V.C.G._____

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

COMPARTMENT		FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM OF F. S. FT. TONS
Fuel Oil									
#1 Wing Tank	(S)	11-12							
#2	(P)	11-12							
#3	(S)	12-13							
#4	(P)	12-13							
#5	(S)	13-14							
#6	(P)	13-14							
#13	(S)	20-21							
#14	(P)	20-21							
#15	(S)	21-22							
#16	(P)	21-22							
#17	(S)	22-23							
#18	(P)	22-23							
SUBTOTAL									
Fresh water									
F.W. Tank	(S)	15							
F.W. Tank	(P)	15							
SUBTOTAL									
Lub. Oil									
Sludge Tank		14-15½							
S.W. Ballast									
#1 D.B. Tank		7-11							
#2		11-14							
#3		14-17							
#4		17-20							
#5		20-23							
#7 Wing Tank	(S)	14-15½							
#9	(S)	16-18							
#10	(P)	16-18							
#11	(S)	18½-20							

COMPARTMENT LOADING CONT.

GIANNOTTI & ASSOCIATES, INC.
NAVAL ARCHITECTS
OCEAN ENGINEERS
MARINE ENGINEERS

COMPARTMENT	FR.	CAP CU. FT.	WEIGHT TONS	V.C.G. ABV.BL FT.	MOMENT ABV.BL FT.TONS	L.C.G. ABT.F.P. FT.	MOMENT ABT.F.P. FT. TONS	VERT.MOM OF F. S. FT. TONS
#12 Wing Tank (P)	18½-20							
#1 Deep Tank (S)	16-17							
#2 (P)	16-17							
#3 (S)	17-18							
#4 (P)	17-18							
#5 (CL)	18½-20							
#6 (S)	23-27							
#7 (P)	23-27							
SUBTOTAL								
Anti Roll Tanks (50%)								
FWD	15½-16							
AFT	18-19½							
SUBTOTAL								
Anti Roll Tanks (100%)								
FWD	15½-16							
AFT	18-19½							
SUBTOTAL								

APPENDIX
A

TANK TABLES

EQUIVALENTS

1 TON	=	2240 LBS.
1 CU. FT.	=	7.481 GALLONS
1 TON F.O.	=	38.00 CU. FT.
1 TON S.W.	=	35.00 CU. FT.
1 TON F.W.	=	36.00 CU. FT.

CONVERSION FACTORS

Multiply Tons F.O. by 0.883 = Tons D.O. (@ 43.00 CU.FT./TON)

Divide Gallons F.O. by 322.00 = Tons D.O. " " " "

SUMMARY

F.O. TANKS

TANK	FRS.	VCG AT 100% FULL	F.O. CAP. IN GALS.		F.O. CAP. IN TONS	
			100%	95%	100%	95%
F.O. WING TANK NO. 1 STBD	11-12	9.13	3821	3630	13.4	12.7
F.O. WING TANK NO. 2 PORT	11-12	9.13	3821	3630	13.4	12.7
F.O. WING TANK NO. 3 STBD	12-13	8.24	5818	5528	20.4	19.4
F.O. WING TANK NO. 4 PORT	12-13	8.24	5818	5528	20.4	19.4
F.O. WING TANK NO. 5 STBD	13-14	8.98	5489	5215	19.3	18.3
F.O. WING TANK NO. 6 PORT	13-14	8.01	6544	6217	23.0	21.8
F.O. WING TANK NO. 13 STBD	20-21	7.82	6335	6018	22.2	21.1
F.O. WING TANK NO. 14 PORT	20-21	7.80	6312	5997	22.2	21.0
F.O. WING TANK NO. 15 STBD	21-22	8.01	6529	6203	22.9	21.8
F.O. WING TANK NO. 16 PORT	21-22	8.01	6529	6203	22.9	21.8
F.O. WING TANK NO. 17 STBD	22-23	8.33	4345	4128	15.2	14.5
F.O. WING TANK NO. 18 PORT	22-23	8.33	4345	4128	15.2	14.5

S.W. BALLAST TANKS

TANK	FRS.	VCG AT 100% FULL	S.W. CAP. IN TONS	
			100%	95%
S.W. BALLAST TK. NO. 1 PORT	7-11	1.68	6.9	6.6
S.W. BALLAST TK. NO. 1 STBD	7-11	1.68	6.9	6.6
S.W. BALLAST D.B. TK. NO. 2	11-14	1.50	144.9	137.6
S.W. BALLAST D.B. TK. NO. 3	14-17	1.50	137.8	130.9
S.W. BALLAST D.B. TK. NO. 4	17-20	1.50	139.3	132.3
S.W. BALLAST D.B. TK. NO. 5	20-23	1.71	147.0	139.6

S.W. BALLAST TANKS (CONTINUED)

TANK	FRS.	VCG AT 100% FULL	S.W. CAP. IN TONS 100%	95%
S.W. BALLAST WING TK. NO. 7	14-15	8.01	37.4	35.6
S.W. BALLAST WING TK. NO. 9	16-18	8.01	49.9	47.4
S.W. BALLAST WING TK. NO. 10	16-18	8.01	49.9	47.4
S.W. BALLAST WING TK. NO. 11	18-20	8.01	37.4	35.6
S.W. BALLAST WING TK. NO. 12	18-20	8.01	37.4	35.6
S.W. BALLAST DEEP NO. 1	16-17	9.00	64.5	61.2
S.W. BALLAST DEEP NO. 2	16-17	9.00	64.5	61.2
S.W. BALLAST DEEP NO. 3	17-18	9.00	64.5	61.2
S.W. BALLAST DEEP NO. 4	17-18	9.00	64.5	61.2
S.W. BALLAST DEEP NO. 5	18-20	9.00	325.8	309.5
S.W. BALLAST DEEP NO. 6	23-27	9.25	88.9	84.4
S.W. BALLAST DEEP NO. 7	23-27	9.35	92.7	88.1
S.W. BALLAST DEEP NO. 8	27-34	11.26	104.3	99.0
SLUDGE TANK (NO. 8)	14-15	8.01	25.0	23.7
ANTI-ROLLING TANK FWD	15½-16	8.81	120.8	114.7
ANTI-ROLLING TANK AFT	18-18½	"	"	"

SHIP NO. DWG. NO. 100-121 GALLONS DATE 07-30-76 PAGE 1

F.O. WING TANK NO. 1 STBD FUEL OIL 0.0 FT TRIM FR. NO. 11 - 12

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.86	0	13.	19.	27.	35.	43.	51.	59.	67.	75.	83.	91.	100.
1.46	1	108.	119.	132.	146.	160.	173.	137.	201.	215.	228.	242.	256.
2.08	2	269.	284.	299.	314.	329.	344.	359.	373.	388.	403.	418.	433.
2.59	3	448.	463.	478.	493.	508.	523.	538.	553.	568.	583.	598.	613.
3.09	4	628.	647.	672.	696.	720.	745.	769.	793.	818.	842.	866.	890.
3.80	5	915.	938.	960.	981.	1003.	1025.	1047.	1069.	1091.	1112.	1134.	1156.
4.38	6	1178.	1200.	1221.	1243.	1265.	1287.	1309.	1331.	1352.	1374.	1396.	1418.
4.95	7	1440.	1463.	1487.	1512.	1537.	1561.	1586.	1611.	1635.	1660.	1684.	1709.
5.53	8	1734.	1758.	1783.	1807.	1832.	1857.	1881.	1906.	1931.	1955.	1980.	2004.
6.11	9	2029.	2054.	2080.	2106.	2132.	2157.	2183.	2209.	2235.	2260.	2286.	2312.
6.66	10	2338.	2363.	2389.	2415.	2441.	2466.	2492.	2518.	2544.	2570.	2595.	2621.
7.20	11	2647.	2673.	2698.	2725.	2750.	2776.	2801.	2827.	2853.	2879.	2904.	2930.
7.75	12	2956.	2988.	3028.	3067.	3106.	3146.	3185.	3224.	3263.	3303.	3342.	3381.
8.46	13	3420.	3456.	3488.	3519.	3551.	3583.	3615.	3647.	3678.	3710.	3742.	3774.
9.10	14	3806.	3821.	3821.	3821.	3821.	3821.	3821.	3821.	3821.	3821.	3821.	3821.

	GALLONS	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	3821.	14	0	4	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	3630.	13	6	3	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	63.				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	5	4	
LOW POINT OF TANK		0	6	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 GALLONS DATE 07-30-76 PAGE 2

F.O. WING TANK NO. 2 PORT FUEL OIL 0.0 FT TRIM FR. NO. 11- 12

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.74	0	10.	13.	17.	26.	34.	42.	50.	58.	66.	74.	82.	90.
1.41	1	99.	107.	117.	130.	144.	158.	171.	185.	199.	212.	226.	240.
2.02	2	253.	267.	281.	296.	311.	326.	341.	356.	371.	385.	400.	415.
2.54	3	430.	445.	460.	475.	490.	505.	520.	535.	549.	564.	579.	594.
3.04	4	609.	624.	641.	665.	690.	714.	738.	762.	787.	811.	835.	859.
3.72	5	884.	908.	932.	953.	975.	997.	1019.	1040.	1062.	1084.	1106.	1127.
4.31	6	1149.	1171.	1193.	1214.	1236.	1258.	1280.	1302.	1323.	1345.	1367.	1389.
4.88	7	1410.	1432.	1454.	1479.	1503.	1528.	1552.	1577.	1602.	1626.	1651.	1675.
5.46	8	1700.	1724.	1749.	1773.	1798.	1823.	1847.	1872.	1896.	1921.	1945.	1970.
6.04	9	1994.	2019.	2044.	2069.	2095.	2121.	2146.	2172.	2198.	2224.	2249.	2275.
6.59	10	2301.	2326.	2352.	2378.	2403.	2429.	2455.	2480.	2506.	2532.	2558.	2583.
7.13	11	2609.	2635.	2660.	2686.	2712.	2737.	2763.	2789.	2815.	2840.	2866.	2892.
7.68	12	2917.	2943.	2969.	3008.	3047.	3087.	3126.	3165.	3204.	3244.	3283.	3322.
8.37	13	3361.	3401.	3440.	3472.	3504.	3535.	3567.	3599.	3631.	3663.	3694.	3726.
9.02	14	3758.	3790.	3821.	3821.	3821.	3821.	3821.	3821.	3821.	3821.	3821.	3821.

	GALLONS	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	3821.	14	2	0	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	3630.	13	7	7	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	108.				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	4	3	
LOW POINT OF TANK		0	6	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 GALLONS DATE 07-30-76 PAGE 3

F.O. WING TANK NO. 3 STBD FUEL OIL 0.0 FT TRIM FR. NO. 12- 13

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.00	0	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	2.	4.
0.25	1	5.	6.	8.	9.	11.	12.	13.	19.	27.	35.	42.	50.
0.57	2	58.	67.	77.	86.	101.	119.	137.	157.	178.	198.	219.	239.
1.09	3	260.	283.	307.	331.	354.	379.	408.	437.	467.	496.	526.	555.
1.68	4	584.	614.	643.	672.	702.	732.	765.	798.	831.	864.	897.	930.
2.24	5	963.	997.	1030.	1063.	1096.	1129.	1162.	1195.	1228.	1262.	1295.	1328.
2.79	6	1361.	1394.	1427.	1461.	1495.	1529.	1563.	1597.	1631.	1665.	1699.	1733.
3.32	7	1766.	1800.	1834.	1868.	1902.	1936.	1971.	2006.	2041.	2076.	2111.	2146.
3.84	8	2181.	2215.	2250.	2285.	2320.	2355.	2390.	2425.	2460.	2495.	2530.	2564.
4.37	9	2599.	2634.	2669.	2704.	2739.	2774.	2809.	2844.	2880.	2915.	2950.	2985.
4.89	10	3020.	3056.	3091.	3126.	3161.	3197.	3232.	3267.	3302.	3337.	3373.	3408.
5.41	11	3443.	3478.	3513.	3549.	3584.	3619.	3656.	3692.	3729.	3765.	3802.	3838.
5.93	12	3875.	3911.	3948.	3984.	4021.	4057.	4094.	4130.	4167.	4203.	4240.	4276.
6.45	13	4313.	4349.	4386.	4422.	4459.	4495.	4532.	4568.	4605.	4641.	4678.	4714.
6.97	14	4751.	4787.	4824.	4861.	4898.	4935.	4972.	5009.	5046.	5084.	5121.	5158.
7.50	15	5195.	5232.	5269.	5306.	5343.	5380.	5418.	5455.	5492.	5529.	5566.	5603.
8.02	16	5640.	5677.	5715.	5752.	5789.	5818.	5818.	5818.	5818.	5818.	5818.	5818.

	GALLONS	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	5818.	16	4	6	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	5528.	15	8	7	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	1	0	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 GALLONS DATE 07-30-76 PAGE 4

F.O. WING TANK NO. 4 PORT FUEL OIL 0.0 FT TRIM FR. NO. 12- 13

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.20	0	0.	1.	3.	5.	6.	8.	9.	11.	12.	14.	19.	27.
0.45	1	34.	46.	57.	68.	79.	92.	113.	135.	156.	178.	200.	221.
1.05	2	243.	262.	281.	299.	318.	337.	356.	379.	406.	433.	460.	487.
0.80	3	514.	539.	565.	590.	616.	641.	666.	696.	725.	758.	791.	824.
0.55	4	857.	889.	921.	953.	984.	1016.	1048.	1080.	1111.	1143.	1175.	1207.
2.12	5	1238.	1272.	1305.	1338.	1371.	1404.	1438.	1471.	1505.	1539.	1573.	1607.
3.16	6	1641.	1675.	1709.	1743.	1777.	1811.	1844.	1878.	1912.	1947.	1982.	2016.
3.68	7	2051.	2086.	2121.	2156.	2191.	2226.	2261.	2296.	2331.	2366.	2400.	2435.
4.21	8	2470.	2505.	2540.	2575.	2610.	2645.	2680.	2715.	2749.	2784.	2820.	2855.
4.73	9	2890.	2925.	2961.	2996.	3031.	3066.	3101.	3137.	3172.	3207.	3242.	3277.
5.25	10	3313.	3348.	3383.	3418.	3453.	3489.	3524.	3559.	3594.	3630.	3667.	3703.
5.77	11	3740.	3776.	3813.	3849.	3886.	3922.	3958.	3995.	4031.	4068.	4104.	4141.
6.29	12	4177.	4214.	4250.	4287.	4323.	4360.	4396.	4433.	4469.	4506.	4542.	4579.
6.81	13	4615.	4652.	4688.	4725.	4761.	4798.	4835.	4872.	4909.	4946.	4983.	5020.
7.34	14	5057.	5095.	5132.	5169.	5206.	5243.	5280.	5317.	5354.	5392.	5429.	5466.
7.86	15	5503.	5540.	5577.	5614.	5651.	5689.	5726.	5763.	5800.	5818.	5818.	5818.

	GALLONS	FEET	INCHES	8TH	
TANK CAPACITY AT 100% FULL	5818.	15	8	3	SOUNDING
TANK CAPACITY AT 0.95 FULL	5528.	15	0	5	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	14.				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	3	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 GALLONS DATE 07-30-76 PAGE 5

F.O. WING TANK NO. 5 STBD FUEL OIL 0.0 FT TRIM FR. NO. 13- 14

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0	1	2	3	4	5	6	7	8	9	10	11
0.02	0	0.	1.	2.	3.	4.	5.	6.	8.	16.	24.	32.	40.
0.63	1	48.	56.	66.	77.	89.	101.	112.	124.	136.	148.	159.	171.
1.16	2	183.	195.	207.	220.	234.	250.	265.	281.	297.	312.	328.	343.
1.67	3	359.	376.	392.	409.	426.	443.	460.	477.	495.	512.	529.	546.
2.19	4	564.	581.	598.	616.	633.	651.	668.	685.	703.	720.	737.	755.
2.71	5	772.	790.	808.	833.	863.	892.	922.	951.	981.	1010.	1040.	1070.
3.49	6	1099.	1128.	1158.	1187.	1216.	1246.	1278.	1317.	1355.	1394.	1432.	1470.
4.23	7	1509.	1548.	1587.	1627.	1666.	1705.	1745.	1784.	1823.	1862.	1902.	1941.
4.89	8	1980.	2020.	2060.	2100.	2140.	2180.	2219.	2259.	2298.	2338.	2378.	2417.
5.51	9	2457.	2496.	2536.	2575.	2615.	2655.	2694.	2734.	2773.	2813.	2852.	2892.
6.09	10	2931.	2971.	3011.	3050.	3090.	3129.	3169.	3209.	3249.	3288.	3328.	3368.
6.64	11	3408.	3448.	3488.	3527.	3567.	3607.	3647.	3687.	3727.	3768.	3806.	3846.
7.18	12	3886.	3925.	3964.	4003.	4042.	4081.	4120.	4159.	4198.	4237.	4276.	4315.
7.71	13	4354.	4392.	4431.	4471.	4510.	4549.	4588.	4627.	4666.	4706.	4745.	4784.
8.26	14	4823.	4862.	4901.	4940.	4980.	5019.	5057.	5096.	5134.	5173.	5211.	5249.
8.76	15	5288.	5326.	5365.	5403.	5441.	5480.	5489.	5489.	5489.	5489.	5489.	5489.

	GALLONS	FEET	INCHES	8TH	
TANK CAPACITY AT 100% FULL	5489.	15	5	2	SOUNDING
TANK CAPACITY AT 0.95 FULL	5215.	14	10	0	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	4.				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	4	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 GALLONS DATE 07-30-76 PAGE 6

F.O. WING TANKS NO. 6 PORT FUEL OIL 0.0 FT TRIM FR. NO. 13- 14

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.02	0	1.	5.	9.	13.	16.	20.	30.	46.	62.	79.	95.	111.
0.73	1	134.	165.	196.	226.	257.	287.	318.	348.	379.	409.	440.	470.
1.33	2	504.	540.	576.	612.	648.	685.	721.	757.	793.	829.	865.	901.
1.89	3	939.	978.	1017.	1055.	1094.	1133.	1172.	1211.	1249.	1288.	1327.	1366.
2.43	4	1405.	1444.	1482.	1521.	1560.	1599.	1638.	1677.	1715.	1754.	1793.	1832.
2.96	5	1871.	1910.	1949.	1988.	2026.	2065.	2104.	2143.	2182.	2221.	2260.	2299.
3.48	6	2338.	2377.	2416.	2454.	2493.	2532.	2571.	2610.	2649.	2688.	2727.	2766.
3.99	7	2805.	2844.	2883.	2922.	2961.	3000.	3039.	3078.	3117.	3156.	3195.	3234.
4.50	8	3273.	3312.	3351.	3391.	3430.	3469.	3508.	3548.	3587.	3626.	3665.	3705.
5.00	9	3744.	3783.	3822.	3862.	3901.	3940.	3980.	4019.	4058.	4097.	4137.	4176.
5.51	10	4215.	4254.	4293.	4332.	4371.	4410.	4449.	4488.	4527.	4566.	4605.	4644.
6.01	11	4683.	4722.	4761.	4800.	4839.	4878.	4917.	4956.	4995.	503'.	5073.	5112.
6.51	12	5151.	5190.	5229.	5268.	5307.	5345.	5384.	5423.	5462.	5502.	5541.	5580.
7.02	13	5620.	5659.	5699.	5738.	5777.	5817.	5856.	5896.	5935.	5974.	6014.	6053.
7.53	14	6092.	6132.	6171.	6210.	6250.	6289.	6328.	6367.	6407.	6446.	6485.	6524.

	GALLONS	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	6544.	14	11	3	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	6217.	14	3	1	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	14.				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	4	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 GALLONS DATE 07-30-76 PAGE 7

F.O. WING TANK NO. 13 STBD FUEL OIL 0.0 FT TRIM FR. NO. 20- 21

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.00	0	0	2	5	8	11	14	17	20	28	41	54	67
0.56	1	80	93	106	119	144	168	192	217	241	266	290	315
1.07	2	339	365	391	418	444	470	498	529	560	591	622	653
1.57	3	684	718	751	784	817	850	883	916	952	987	1023	1059
2.07	4	1094	1131	1169	1206	1243	1280	1317	1355	1392	1429	1466	1503
2.59	5	1540	1578	1617	1655	1693	1731	1769	1807	1845	1883	1921	1959
3.10	6	1997	2036	2075	2114	2153	2192	2231	2270	2308	2347	2386	2425
3.62	7	2464	2503	2543	2582	2621	2660	2700	2739	2778	2817	2857	2896
4.13	8	2935	2974	3014	3053	3092	3131	3170	3210	3249	3288	3327	3366
4.64	9	3405	3444	3483	3522	3561	3600	3639	3678	3717	3756	3795	3834
5.14	10	3873	3912	3951	3990	4029	4068	4107	4146	4185	4224	4263	4302
5.65	11	4341	4380	4419	4458	4497	4536	4575	4614	4653	4692	4731	4770
6.15	12	4809	4848	4887	4926	4965	5004	5043	5082	5120	5159	5198	5237
6.65	13	5276	5315	5354	5393	5432	5469	5502	5535	5567	5600	5633	5665
7.11	14	5698	5731	5763	5796	5829	5861	5894	5927	5959	5992	6024	6057
7.55	15	6090	6122	6155	6188	6220	6253	6286	6318	6335	6335	6335	6335

	GALLONS	FEET	INCHES	BTH	
TANK CAPACITY AT 100% FULL	6335	15	7	4	SOUNDING
TANK CAPACITY AT 0.95 FULL	6018	14	9	6	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	11				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	0	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 GALLONS DATE 07-30-76 PAGE 8

F.O. WING TANK NO. 14 PORT FUEL OIL 0.0 FT TRIM FR. NO. 20- 21

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.00	0	0.	2.	5.	8.	11.	14.	17.	20.	28.	41.	54.	67.
0.56	1	80.	93.	106.	119.	144.	168.	192.	217.	241.	266.	290.	315.
1.07	2	339.	365.	391.	418.	444.	470.	498.	529.	560.	591.	622.	653.
1.57	3	684.	719.	753.	787.	821.	855.	889.	923.	960.	996.	1033.	1069.
2.09	4	1106.	1145.	1183.	1222.	1261.	1300.	1339.	1378.	1416.	1455.	1494.	1533.
2.62	5	1572.	1610.	1649.	1688.	1727.	1766.	1805.	1844.	1883.	1921.	1960.	1999.
3.15	6	2038.	2077.	2116.	2155.	2194.	2233.	2271.	2310.	2349.	2388.	2427.	2466.
3.66	7	2505.	2544.	2583.	2622.	2661.	2700.	2739.	2778.	2817.	2856.	2895.	2934.
4.17	8	2973.	3012.	3050.	3089.	3128.	3167.	3206.	3245.	3284.	3323.	3361.	3400.
4.68	9	3439.	3478.	3516.	3555.	3594.	3632.	3671.	3710.	3749.	3787.	3826.	3865.
5.18	10	3903.	3942.	3981.	4019.	4058.	4097.	4136.	4174.	4213.	4252.	4290.	4329.
5.67	11	4368.	4407.	4445.	4484.	4523.	4561.	4600.	4639.	4678.	4716.	4755.	4794.
6.17	12	4832.	4871.	4910.	4949.	4987.	5026.	5065.	5103.	5142.	5181.	5219.	5258.
6.67	13	5297.	5336.	5374.	5413.	5452.	5485.	5516.	5548.	5579.	5611.	5643.	5674.
7.12	14	5706.	5737.	5769.	5801.	5832.	5864.	5895.	5927.	5958.	5990.	6022.	6053.
7.54	15	6085.	6116.	6148.	6180.	6211.	6243.	6274.	6306.	6312.	6312.	6312.	6312.

	GALLONS	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	6312.	15	7	1	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	5997.	14	9	1	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	11.				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	0	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 GALLONS DATE 07-30-76 PAGE 9

F.O. WING TANK NO. 15 STBD. FUEL OIL 0.0 FT TRIM FR. NO. 21- 22

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.02	0	1.	4.	7.	10.	13.	16.	19.	22.	35.	48.	61.	74.
0.59	1	87.	101.	114.	136.	162.	187.	213.	238.	264.	289.	315.	340.
1.13	2	366.	393.	420.	446.	473.	505.	537.	569.	602.	634.	666.	699.
1.65	3	731.	766.	800.	835.	869.	904.	940.	977.	1014.	1051.	1088.	1125.
2.17	4	1162.	1200.	1237.	1274.	1312.	1349.	1387.	1424.	1461.	1499.	1536.	1573.
2.68	5	1611.	1648.	1685.	1722.	1760.	1797.	1834.	1871.	1909.	1946.	1983.	2021.
3.18	6	2058.	2098.	2139.	2179.	2220.	2260.	2301.	2342.	2383.	2424.	2464.	2505.
3.72	7	2546.	2586.	2625.	2664.	2703.	2743.	2782.	2821.	2860.	2900.	2939.	2978.
4.23	8	3017.	3057.	3096.	3135.	3175.	3214.	3253.	3292.	3331.	3370.	3409.	3448.
4.73	9	3487.	3526.	3565.	3604.	3643.	3682.	3721.	3759.	3798.	3837.	3876.	3915.
5.24	10	3954.	3993.	4032.	4071.	4110.	4149.	4188.	4227.	4266.	4305.	4344.	4383.
5.74	11	4422.	4461.	4500.	4539.	4578.	4617.	4656.	4695.	4734.	4773.	4812.	4851.
6.25	12	4890.	4929.	4968.	5007.	5046.	5085.	5124.	5163.	5202.	5241.	5280.	5319.
6.75	13	5359.	5398.	5437.	5476.	5515.	5554.	5593.	5632.	5671.	5710.	5749.	5788.
7.25	14	5827.	5866.	5905.	5944.	5983.	6022.	6061.	6100.	6139.	6178.	6217.	6256.
7.75	15	6295.	6334.	6373.	6412.	6451.	6490.	6529.	6529.	6529.	6529.	6529.	6529.

	GALLONS	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	6529.	15	6	0	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	6203.	14	9	5	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	14.				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	3	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 GALLONS DATE 07-30-76 PAGE 10

F.O. WING TANKS NO. 16 PORT FUEL OIL 0.0 FT TRIM FR. NO. 21- 22

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.00	0	0	3	6	9	12	15	18	21	33	46	60	73
0.59	1	87	101	115	137	163	189	215	241	267	293	319	345
1.14	2	370	397	423	450	476	508	540	572	603	635	667	699
1.65	3	731	764	798	831	864	897	931	967	1003	1038	1074	1109
2.15	4	1145	1182	1219	1257	1294	1331	1368	1405	1443	1480	1517	1554
2.06	5	1591	1630	1669	1708	1747	1786	1824	1863	1902	1941	1980	2019
3.18	6	2058	2097	2136	2175	2213	2252	2291	2330	2370	2409	2448	2487
3.70	7	2527	2566	2605	2644	2684	2723	2762	2801	2841	2880	2919	2959
4.21	8	2998	3037	3076	3116	3155	3194	3233	3273	3311	3350	3389	3428
4.71	9	3467	3506	3545	3584	3623	3662	3701	3740	3779	3818	3857	3896
5.22	10	3935	3974	4013	4052	4091	4130	4168	4207	4246	4286	4325	4364
5.72	11	4403	4442	4481	4520	4559	4598	4637	4676	4715	4754	4793	4832
6.22	12	4871	4910	4950	4990	5030	5069	5109	5149	5189	5228	5268	5308
6.74	13	5347	5387	5427	5467	5506	5546	5586	5625	5665	5705	5745	5784
7.25	14	5824	5864	5903	5943	5983	6023	6062	6102	6142	6181	6221	6261
7.76	15	6901	6340	6380	6420	6460	6499	6529	6529	6529	6529	6529	6529

	GALLONS	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	6529.	15	5	6	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	6203.	14	9	4	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	9.				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	0	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 GALLONS DATE 07-30-76 PAGE 11

F.O. WING TANK NO. 17 STBD. FUEL OIL 0.0 FT TRIM FR. NO. 22- 23

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.12	0	0.	0.	0.	2.	3.	5.	6.	8.	11.	13.	15.	18.
0.74	1	20.	23.	35.	47.	59.	70.	82.	94.	106.	117.	129.	141.
1.45	2	153.	165.	177.	195.	214.	234.	253.	273.	292.	311.	331.	350.
2.03	3	370.	389.	409.	428.	450.	474.	497.	521.	544.	568.	591.	615.
2.53	4	638.	668.	698.	728.	758.	788.	818.	848.	878.	908.	938.	968.
3.16	5	1000.	1018.	1037.	1056.	1074.	1093.	1111.	1130.	1149.	1167.	1186.	1205.
3.51	6	1223.	1249.	1274.	1300.	1326.	1351.	1377.	1404.	1432.	1459.	1487.	1514.
4.01	7	1541.	1569.	1596.	1624.	1651.	1679.	1706.	1733.	1761.	1788.	1816.	1843.
4.52	8	1871.	1898.	1925.	1953.	1980.	2008.	2035.	2062.	2090.	2117.	2144.	2171.
5.03	9	2198.	2225.	2252.	2279.	2306.	2334.	2361.	2388.	2415.	2442.	2469.	2496.
5.54	10	2523.	2550.	2578.	2605.	2632.	2659.	2686.	2713.	2741.	2768.	2796.	2823.
6.04	11	2850.	2878.	2905.	2933.	2960.	2988.	3015.	3042.	3070.	3097.	3125.	3152.
6.55	12	3179.	3207.	3234.	3262.	3289.	3317.	3344.	3371.	3399.	3426.	3454.	3481.
7.05	13	3509.	3536.	3563.	3591.	3618.	3646.	3673.	3701.	3728.	3755.	3783.	3810.
7.55	14	3838.	3865.	3893.	3920.	3947.	3975.	4002.	4030.	4057.	4085.	4112.	4139.
8.06	15	4167.	4194.	4222.	4249.	4276.	4304.	4331.	4345.	4345.	4345.	4345.	4345.

	GALLONS	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	4345.	15	6	4	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	4128.	14	10	4	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	2.				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	0	
LOW POINT OF TANK		0	1	4	ABV. B.L.

SHIP NO. DWG. NO. 100-121 GALLONS DATE 07-30-76 PAGE 12

F.O. WING TANK NO. 1B PORT FUEL OIL 0.0 FT TRIM FR. NO. 22- 23

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.12	0	0.	0.	0.	2.	3.	5.	6.	8.	10.	13.	15.	17.
0.72	1	19.	22.	34.	46.	59.	72.	84.	97.	109.	122.	134.	147.
1.49	2	159.	171.	186.	205.	225.	244.	264.	283.	303.	322.	341.	361.
2.05	3	380.	400.	419.	439.	462.	486.	509.	532.	556.	579.	602.	625.
2.55	4	649.	673.	697.	721.	746.	770.	794.	818.	843.	867.	891.	916.
3.06	5	940.	964.	989.	1015.	1042.	1068.	1094.	1120.	1146.	1173.	1199.	1225.
3.56	6	1251.	1279.	1307.	1335.	1363.	1391.	1418.	1446.	1473.	1494.	1514.	1535.
4.03	7	1555.	1583.	1610.	1637.	1665.	1692.	1720.	1747.	1775.	1802.	1829.	1857.
4.54	8	1884.	1912.	1939.	1967.	1994.	2021.	2049.	2076.	2103.	2130.	2157.	2184.
5.05	9	2212.	2239.	2266.	2293.	2320.	2347.	2374.	2401.	2428.	2456.	2483.	2510.
5.56	10	2537.	2564.	2591.	2618.	2645.	2672.	2700.	2727.	2754.	2782.	2809.	2837.
6.07	11	2864.	2892.	2919.	2946.	2974.	3001.	3029.	3056.	3084.	3111.	3138.	3166.
6.57	12	3193.	3221.	3248.	3275.	3303.	3330.	3358.	3385.	3413.	3440.	3467.	3495.
7.07	13	3522.	3550.	3577.	3605.	3633.	3661.	3690.	3718.	3747.	3775.	3804.	3832.
7.57	14	3860.	3889.	3917.	3946.	3974.	4002.	4031.	4057.	4083.	4109.	4136.	4162.
7.84	15	4188.	4214.	4240.	4267.	4293.	4319.	4345.	4345.	4345.	4345.	4345.	4345.

	GALLONS	FEET	INCHES	8TH	
TANK CAPACITY AT 100% FULL	4345.	15	6	0	
TANK CAPACITY AT 0.95 FULL	4128.	14	9	5	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	2.				SOUNDING
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	0	
LOW POINT OF TANK		0	1	4	ABV. B.L.

SHIP NO. DWG. NO. 100-121 GALLONS DATE 07-30-76 PAGE 13

ANTI-ROLLING TANK (STBD SOUNDING) FUEL OIL 0.0 FT TRIM FR. NO. 18- 19

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.02	0	1.	4.	8.	11.	14.	17.	21.	32.	47.	63.	78.	94.
0.64	1	109.	126.	153.	181.	209.	237.	265.	293.	321.	349.	377.	405.
1.22	2	433.	461.	490.	524.	558.	592.	626.	660.	694.	727.	761.	795.
1.75	3	829.	863.	896.	985.	1200.	1415.	1630.	1845.	2060.	2275.	2490.	2704.
2.56	4	2919.	3137.	3354.	3572.	3789.	4006.	4224.	4441.	4658.	4876.	5093.	5310.
3.46	5	5528.	5745.	5963.	6180.	6397.	6615.	6832.	7049.	7267.	7484.	7701.	7919.
4.01	6	8136.	8368.	8600.	8832.	9063.	9295.	9528.	9760.	9992.	10224.	10456.	10688.
4.54	7	10921.	11153.	11385.	11617.	11849.	12081.	12314.	12546.	12778.	13010.	13242.	13475.
5.06	8	13707.	13939.	14171.	14403.	14635.	14868.	15100.	15332.	15564.	15796.	16028.	16261.
5.57	9	16493.	16725.	16957.	17189.	17421.	17654.	17886.	18118.	18350.	18582.	18815.	19047.
6.08	10	19279.	19511.	19743.	19975.	20208.	20440.	20672.	20904.	21137.	21369.	21501.	21834.
6.59	11	22066.	22298.	22531.	22763.	22995.	23228.	23460.	23692.	23925.	24157.	24389.	24621.
7.09	12	24854.	25086.	25318.	25551.	25783.	26015.	26248.	26480.	26712.	26945.	27177.	27409.
7.60	13	27642.	27874.	28106.	28339.	28571.	28803.	29036.	29268.	29500.	29733.	29965.	30197.
8.11	14	30430.	30662.	30895.	31127.	31359.	31592.	31823.	32055.	32287.	32519.	32751.	32983.
8.61	15	33215.	33446.	33678.	33910.	34142.	34345.	34345.	34345.	34345.	34345.	34345.	34345.

	GALLONS	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	~~34345.~~	~~15~~	~~4~~	~~7~~	
..... TANK CAPACITY AT 0.95 FULL	32628.	14	9	3	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	5.				SOUNDING
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	3	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 GALLONS DATE 07-30-76 PAGE 14

ANTI-ROLLING TANK (PORT SOUNDING) FUEL OIL 0.0 FT TRIM FR. NO. 18- 19

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.00	0	0.	3.	6.	10.	13.	17.	20.	30.	47.	63.	79.	95.
0.65	1	111.	129.	157.	185.	213.	241.	269.	297.	325.	353.	381.	409.
1.23	2	437.	465.	495.	529.	562.	596.	630.	664.	698.	732.	766.	800.
1.76	3	834.	867.	901.	1014.	1229.	1444.	1659.	1874.	2089.	2303.	2518.	2733.
2.37	4	2948.	3166.	3383.	3600.	3818.	4035.	4253.	4470.	4687.	4905.	5122.	5339.
3.47	5	5557.	5775.	5993.	6211.	6430.	6658.	6890.	7122.	7354.	7585.	7817.	8049.
4.04	6	8281.	8513.	8745.	8977.	9208.	9441.	9673.	9905.	10137.	10369.	10601.	10834.
4.57	7	11066.	11298.	11530.	11762.	11994.	12227.	12459.	12691.	12923.	13155.	13388.	13620.
5.09	8	13852.	14084.	14316.	14548.	14781.	15013.	15245.	15477.	15709.	15941.	16174.	16406.
5.60	9	16638.	16870.	17102.	17334.	17567.	17799.	18031.	18263.	18495.	18728.	18960.	19192.
6.11	10	19424.	19656.	19888.	20121.	20353.	20585.	20817.	21050.	21282.	21514.	21747.	21979.
6.61	11	22211.	22444.	22676.	22908.	23140.	23373.	23605.	23837.	24070.	24302.	24534.	24767.
7.12	12	24999.	25231.	25464.	25696.	25928.	26161.	26393.	26625.	26858.	27090.	27322.	27554.
7.62	13	27787.	28019.	28251.	28484.	28716.	28949.	29181.	29413.	29646.	29878.	30110.	30343.
8.14	14	30575.	30807.	31040.	31272.	31505.	31737.	31968.	32200.	32432.	32664.	32896.	33128.
8.64	15	33360.	33591.	33823.	34055.	34287.	34345.	34345.	34345.	34345.	34345.	34345.	34345.

	GALLONS	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	34345.	15	4	2	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	32628.	14	8	6	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	5.				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	0	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 15

F.O. WING TANK NO. 1 STBD FUEL OIL 0.0 FT TRIM FR. NO. 11- 12

CENTER OF GRAVITY	S'D'G FT.	SOUNDING = INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.86	0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3
1.46	1	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.9
2.08	2	0.9	0.9	1.0	1.1	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.5
2.59	3	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.9	1.9	2.0	2.1	2.1
3.09	4	2.2	2.2	2.3	2.4	2.5	2.6	2.7	2.7	2.8	2.9	3.0	3.1
3.80	5	3.2	3.3	3.3	3.4	3.5	3.6	3.6	3.7	3.8	3.9	3.9	4.0
4.38	6	4.1	4.2	4.2	4.3	4.4	4.5	4.6	4.6	4.7	4.8	4.9	4.9
4.95	7	5.0	5.1	5.2	5.3	5.4	5.4	5.5	5.6	5.7	5.8	5.9	6.0
5.53	8	6.1	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.7	6.8	6.9	7.0
6.11	9	7.1	7.2	7.3	7.4	7.5	7.5	7.6	7.7	7.8	7.9	8.0	8.1
6.66	10	8.2	8.3	8.4	8.4	8.5	8.6	8.7	8.8	8.9	9.0	9.1	9.2
7.20	11	9.3	9.4	9.4	9.5	9.6	9.7	9.8	9.9	10.0	10.1	10.2	10.3
7.75	12	10.4	10.5	10.6	10.7	10.9	11.0	11.2	11.3	11.4	11.6	11.7	11.8
8.46	13	12.0	12.1	12.2	12.3	12.4	12.6	12.7	12.8	12.9	13.0	13.1	13.2
9.10	14	13.3	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4

	TONS XXXXX	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	13.4	14	0	4	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	12.7	13	6	3	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.2				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	5	4	
LOW POINT OF TANK		0	6	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 16

F.O. WING TANK NO. 2 PORT FUEL OIL 0.0 FT TRIM FR. NO. 11- 12

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.74	0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3
1.41	1	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.8
2.02	2	0.8	0.9	0.9	1.0	1.0	1.1	1.2	1.2	1.3	1.3	1.4	1.4
2.54	3	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.9	1.9	2.0	2.0
3.04	4	2.1	2.1	2.2	2.3	2.4	2.5	2.5	2.6	2.7	2.8	2.9	3.0
3.72	5	3.2	3.2	3.2	3.3	3.4	3.5	3.5	3.6	3.7	3.8	3.8	3.9
4.31	6	4.0	4.1	4.1	4.2	4.3	4.4	4.5	4.5	4.6	4.7	4.8	4.8
4.88	7	4.9	5.0	5.1	5.2	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.8
5.46	8	5.9	6.0	6.1	6.2	6.3	6.4	6.5	6.5	6.6	6.7	6.8	6.9
6.04	9	7.0	7.1	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0
6.59	10	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9.0	9.0
7.13	11	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	9.9	10.0	10.1
7.68	12	10.2	10.3	10.4	10.5	10.7	10.8	10.9	11.1	11.2	11.4	11.5	11.6
8.37	13	11.8	11.9	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	13.1
9.02	14	13.2	13.3	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4

	TONS ~~XXXXX~~	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	13.4	14	2	0	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	12.7	13	7	7	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.3				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	4	3	
LOW POINT OF TANK		0	6	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 17

F.O. WING TANK NO. 3 STBD — FUEL OIL — 0.0 FT TRIM — FR. NO. 12- 13

CENTER OF GRAVITY	S'D'G FT.	SOUNDING – INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.00	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.25	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
0.57	2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.8
1.09	3	0.9	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9
1.68	4	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.8	2.9	3.0	3.1	3.2
2.24	5	3.3	3.5	3.6	3.7	3.8	3.9	4.0	4.2	4.3	4.4	4.5	4.6
2.79	6	4.7	4.9	5.0	5.1	5.2	5.3	5.5	5.6	5.7	5.8	5.9	6.0
3.32	7	6.2	6.3	6.4	6.5	6.6	6.8	6.9	7.0	7.1	7.3	7.4	7.5
3.84	8	7.6	7.7	7.9	8.0	8.1	8.2	8.4	8.5	8.6	8.7	8.9	9.0
4.37	9	9.1	9.2	9.3	9.5	9.6	9.7	9.8	10.0	10.1	10.2	10.3	10.5
4.89	10	10.6	10.7	10.8	11.0	11.1	11.2	11.3	11.4	11.6	11.7	11.8	11.9
5.41	11	12.1	12.2	12.3	12.4	12.6	12.7	12.8	12.9	13.1	13.2	13.3	13.5
5.93	12	13.6	13.7	13.8	14.0	14.1	14.2	14.4	14.5	14.6	14.7	14.9	15.0
6.45	13	15.1	15.3	15.4	15.5	15.6	15.8	15.9	16.0	16.2	16.3	16.4	16.5
6.97	14	16.7	16.8	16.9	17.1	17.2	17.3	17.4	17.6	17.7	17.8	18.0	18.1
7.50	15	18.2	18.4	18.5	18.6	18.8	18.9	19.0	19.1	19.3	19.4	19.5	19.7
8.02	16	19.8	19.9	20.1	20.2	20.3	20.4	20.4	20.4	20.4	20.4	20.4	20.4

	TONS XXXXX GALLONS	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	20.4	16	4	6	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	19.4	15	8	7	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.0				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	1	0	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 18

F.O. WING TANK NO. 4 PORT FUEL OIL 0.0 FT TRIM FR. NO. 12- 13

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.20	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.45	1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.7	0.7
1.05	2	0.8	0.9	0.9	1.0	1.1	1.1	1.2	1.3	1.4	1.5	1.6	1.7
0.80	3	1.8	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.9
0.55	4	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.8	3.9	4.0	4.1	4.2
2.12	5	4.3	4.4	4.5	4.7	4.8	4.9	5.0	5.1	5.2	5.4	5.5	5.6
3.16	6	5.7	5.8	6.0	6.1	6.2	6.3	6.4	6.6	6.7	6.8	6.9	7.0
3.68	7	7.2	7.3	7.4	7.5	7.7	7.8	7.9	8.0	8.2	8.3	8.4	8.5
4.21	8	8.6	8.8	8.9	9.0	9.1	9.3	9.4	9.5	9.6	9.7	9.9	10.0
4.73	9	10.1	10.2	10.4	10.5	10.6	10.7	10.9	11.0	11.1	11.2	11.4	11.5
5.25	10	11.6	11.7	11.9	12.0	12.1	12.2	12.4	12.5	12.6	12.7	12.9	13.0
5.77	11	13.1	13.2	13.4	13.5	13.6	13.8	13.9	14.0	14.1	14.3	14.4	14.5
6.29	12	14.6	14.8	14.9	15.0	15.2	15.3	15.4	15.5	15.7	15.8	15.9	16.1
6.81	13	16.2	16.3	16.4	16.6	16.7	16.8	17.0	17.1	17.2	17.4	17.5	17.6
7.34	14	17.7	17.9	18.0	18.1	18.3	18.4	18.5	18.7	18.8	18.9	19.1	19.2
7.86	15	19.3	19.4	19.6	19.7	19.8	20.0	20.1	20.2	20.4	20.4	20.4	20.4

	TONS	FEET	INCHES	8TH	
TANK CAPACITY AT 100% FULL	20.4	15	8	3	SOUNDING
TANK CAPACITY AT 0.95 FULL	19.4	15	0	5	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.0				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	3	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 19

F.O. WING TANK NO. 5 STBD FUEL OIL 0.0 FT TRIM FR. NO. 13- 14

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.02	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
0.63	1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.6
1.16	2	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.1	1.1	1.2
1.67	3	1.2	1.3	1.3	1.4	1.4	1.5	1.6	1.6	1.7	1.8	1.8	1.9
2.19	4	1.9	2.0	2.1	2.1	2.2	2.2	2.3	2.4	2.4	2.5	2.5	2.6
2.71	5	2.7	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7
3.49	6	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.6	4.7	4.9	5.0	5.1
4.23	7	5.3	5.4	5.5	5.7	5.8	6.0	6.1	6.2	6.4	6.5	6.6	6.8
4.89	8	6.9	7.1	7.2	7.3	7.5	7.6	7.8	7.9	8.0	8.2	8.3	8.5
5.51	9	8.6	8.7	8.9	9.0	9.2	9.3	9.4	9.6	9.7	9.8	10.0	10.1
6.09	10	10.3	10.4	10.5	10.7	10.8	11.0	11.1	11.2	11.4	11.5	11.7	11.8
6.64	11	11.9	12.1	12.2	12.4	12.5	12.6	12.8	12.9	13.1	13.2	13.3	13.5
7.18	12	13.6	13.8	13.9	14.0	14.2	14.3	14.4	14.6	14.7	14.9	15.0	15.1
7.71	13	15.3	15.4	15.5	15.7	15.8	16.0	16.1	16.2	16.4	16.5	16.6	16.8
8.26	14	16.9	17.1	17.2	17.3	17.5	17.6	17.7	17.9	18.0	18.2	18.3	18.4
8.76	15	18.6	18.7	18.8	19.0	19.1	19.2	19.3	19.3	19.3	19.3	19.3	19.3

	TONS XXXXX	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	19.3	15	5	2	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	18.3	14	10	0	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.0				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	4	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 20

F.O. WING TANKS NO. 6 PORT FUEL OIL 0.0 FT TRIM FR. NO. 13- 14

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.02	0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.3
0.73	1	0.4	0.5	0.6	0.7	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6
1.33	2	1.7	1.9	2.0	2.1	2.2	2.4	2.5	2.6	2.7	2.9	3.0	3.1
1.89	3	3.3	3.4	3.5	3.7	3.8	3.9	4.1	4.2	4.3	4.5	4.6	4.8
2.43	4	4.9	5.0	5.2	5.3	5.4	5.6	5.7	5.9	6.0	6.1	6.3	6.4
2.96	5	6.5	6.7	6.8	6.9	7.1	7.2	7.4	7.5	7.6	7.8	7.9	8.0
3.48	6	8.2	8.3	8.5	8.6	8.7	8.9	9.0	9.1	9.3	9.4	9.5	9.7
3.99	7	9.8	10.0	10.1	10.2	10.4	10.5	10.6	10.8	10.9	11.1	11.2	11.3
4.50	8	11.5	11.6	11.7	11.9	12.0	12.2	12.3	12.4	12.6	12.7	12.8	13.0
5.00	9	13.1	13.3	13.4	13.5	13.7	13.8	14.0	14.1	14.2	14.4	14.5	14.6
5.51	10	14.8	14.9	15.1	15.2	15.3	15.5	15.6	15.7	15.9	16.0	16.2	16.3
6.01	11	16.4	16.6	16.7	16.8	17.0	17.1	17.3	17.4	17.5	17.7	17.8	17.9
6.51	12	18.1	18.2	18.3	18.5	18.6	18.8	18.9	19.0	19.2	19.3	19.4	19.6
7.02	13	19.7	19.9	20.0	20.1	20.3	20.4	20.6	20.7	20.8	21.0	21.1	21.2
7.53	14	21.4	21.5	21.7	21.8	21.9	22.1	22.2	22.4	22.5	22.6	22.8	22.9

	TONS XXXXXX	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	23.0	14	11	3	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	21.8	14	3	1	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.0				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	4	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 21

F.O. WING TANK NO. 13 STBD FUEL OIL 0.0 FT TRIM FR. NO. 20- 21

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.00	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2
0.56	1	0.2	0.3	0.3	0.4	0.5	0.5	0.6	0.7	0.8	0.9	1.0	1.1
1.07	2	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.3
1.57	3	2.4	2.5	2.6	2.7	2.8	2.9	3.1	3.2	3.3	3.4	3.6	3.7
2.07	4	3.8	3.9	4.1	4.2	4.3	4.5	4.6	4.7	4.8	5.0	5.1	5.2
2.59	5	5.4	5.5	5.6	5.8	5.9	6.0	6.2	6.3	6.4	6.6	6.7	6.8
3.10	6	7.0	7.1	7.3	7.4	7.5	7.7	7.8	7.9	8.1	8.2	8.3	8.5
3.62	7	8.6	8.8	8.9	9.0	9.2	9.3	9.5	9.6	9.7	9.9	10.0	10.1
4.13	8	10.3	10.4	10.6	10.7	10.8	11.0	11.1	11.2	11.4	11.5	11.7	11.8
4.64	9	11.9	12.1	12.2	12.3	12.5	12.6	12.8	12.9	13.0	13.2	13.3	13.4
5.14	10	13.6	13.7	13.9	14.0	14.1	14.3	14.4	14.5	14.7	14.8	14.9	15.1
5.65	11	15.2	15.4	15.5	15.6	15.8	15.9	16.0	16.2	16.3	16.5	16.6	16.7
6.15	12	16.9	17.0	17.1	17.3	17.4	17.6	17.7	17.8	18.0	18.1	18.2	18.4
6.65	13	18.5	18.7	18.8	18.9	19.1	19.2	19.3	19.4	19.5	19.7	19.8	19.9
7.11	14	20.0	20.1	20.2	20.3	20.5	20.6	20.7	20.8	20.9	21.0	21.1	21.3
7.55	15	21.4	21.5	21.6	21.7	21.8	22.0	22.1	22.2	22.2	22.2	22.2	22.2

	TONS ~~XXXXX GALONS~~	FEET	INCHES	BTH	
..... TANK CAPACITY AT 100% FULL	22.2	15	7	4	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	21.1	14	9	6	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.0				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	0	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 22

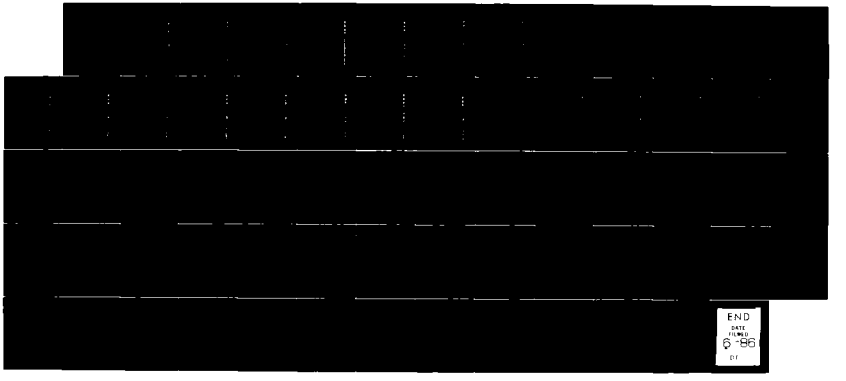
F.O. WING TANK NO. 14 PORT FUEL OIL 0.0 FT TRIM FR. NO. 20- 21

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.00	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2
0.56	1	0.2	0.3	0.3	0.4	0.5	0.5	0.6	0.7	0.8	0.9	1.0	1.1
1.07	2	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.3
1.57	3	2.4	2.5	2.6	2.7	2.8	3.0	3.1	3.2	3.3	3.5	3.6	3.7
2.09	4	3.8	4.0	4.1	4.3	4.4	4.5	4.7	4.8	4.9	5.1	5.2	5.3
2.62	5	5.5	5.6	5.8	5.9	6.0	6.2	6.3	6.4	6.6	6.7	6.8	7.0
3.15	6	7.1	7.3	7.4	7.5	7.7	7.8	7.9	8.1	8.2	8.4	8.5	8.6
3.66	7	8.8	8.9	9.0	9.2	9.3	9.5	9.6	9.7	9.9	10.0	10.1	10.3
4.17	8	10.4	10.5	10.7	10.8	11.0	11.1	11.2	11.4	11.5	11.6	11.8	11.9
4.68	9	12.1	12.2	12.3	12.5	12.6	12.7	12.9	13.0	13.1	13.3	13.4	13.5
5.18	10	13.7	13.8	14.0	14.1	14.2	14.4	14.5	14.6	14.8	14.9	15.0	15.2
5.67	11	15.3	15.5	15.6	15.7	15.9	16.0	16.1	16.3	16.4	16.5	16.7	16.8
6.17	12	17.0	17.1	17.2	17.4	17.5	17.6	17.8	17.9	18.0	18.2	18.3	18.5
6.67	13	18.6	18.7	18.9	19.0	19.1	19.2	19.4	19.5	19.6	19.7	19.8	19.9
7.12	14	20.0	20.1	20.2	20.4	20.5	20.6	20.7	20.8	20.9	21.0	21.1	21.2
7.54	15	21.4	21.5	21.6	21.7	21.8	21.9	22.0	22.1	22.2	22.2	22.2	22.2

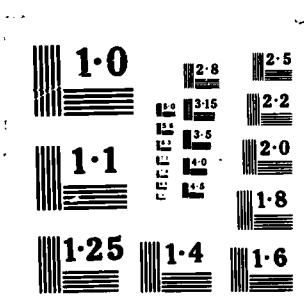
	TONS XXXXX	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	22.2	15	7	1	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	21.0	14	9	1	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.0				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	0	
LOW POINT OF TANK		0	0	0	ABV. B.L.

AD-A167-226 OCEAN CONSTRUCTION PLATFORM SEACON TRIM & STABILITY MANUAL(U) NAVAL FACILITIES ENGINEERING COMMAND WASHINGTON DC CHESAPEAKE DIV 28 MAR 80 2/2

UNCLASSIFIED CHES/NAVFAC-FPO-1-80(5) F/G 13/10 NL



END
DATE FILMED
6-86
DTIC


1·0
1·1
1·25
1·4
1·6
2·8
3·15
3·5
4·0
4·5
2·5
2·2
2·0
1·8

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 23

F.O. WING TANK NO. 15 STBD. FUEL OIL 0.0 FT TRIM FR. NO. 21 - 22

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.02	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2
0.59	1	0.3	0.3	0.4	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.1
1.13	2	1.2	1.3	1.4	1.5	1.6	1.7	1.8	2.0	2.1	2.2	2.3	2.4
1.65	3	2.5	2.6	2.8	2.9	3.0	3.1	3.3	3.4	3.5	3.7	3.8	3.9
2.17	4	4.0	4.2	4.3	4.4	4.6	4.7	4.8	5.0	5.1	5.2	5.4	5.5
2.68	5	5.6	5.8	5.9	6.0	6.1	6.3	6.4	6.5	6.7	6.8	6.9	7.1
3.18	6	7.2	7.3	7.5	7.6	7.8	7.9	8.0	8.2	8.3	8.5	8.6	8.8
3.72	7	8.9	9.0	9.2	9.3	9.5	9.6	9.7	9.9	10.0	10.2	10.3	10.4
4.23	8	10.6	10.7	10.8	11.0	11.1	11.3	11.4	11.5	11.7	11.8	11.9	12.1
4.73	9	12.2	12.4	12.5	12.6	12.8	12.9	13.0	13.2	13.3	13.5	13.6	13.7
5.24	10	13.9	14.0	14.1	14.3	14.4	14.5	14.7	14.8	15.0	15.1	15.2	15.4
5.74	11	15.5	15.6	15.8	15.9	16.1	16.2	16.3	16.5	16.6	16.7	16.9	17.0
6.25	12	17.2	17.3	17.4	17.6	17.7	17.8	18.0	18.1	18.3	18.4	18.5	18.7
6.75	13	18.8	18.9	19.1	19.2	19.4	19.5	19.6	19.8	19.9	20.0	20.2	20.3
7.25	14	20.5	20.6	20.7	20.9	21.0	21.1	21.3	21.4	21.6	21.7	21.8	22.0
7.75	15	22.1	22.2	22.4	22.5	22.6	22.8	22.9	22.9	22.9	22.9	22.9	22.9

	TONS ~~GALLONS~~	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	22.9	15	6	0	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	21.8	14	9	5	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.0				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	3	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 24

F.O. WING TANKS NO. 16 PORT FUEL OIL 0.0 FT TRIM FR. NO. 21- 22

CENTER OF GRAVITY	S'D'G FT.	SOUNDING – INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.00	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2
0.59	1	0.3	0.3	0.4	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2
1.14	2	1.3	1.3	1.4	1.5	1.6	1.7	1.9	2.0	2.1	2.2	2.3	2.4
1.65	3	2.5	2.6	2.8	2.9	3.0	3.1	3.2	3.4	3.5	3.6	3.7	3.9
2.15	4	4.0	4.1	4.2	4.4	4.5	4.6	4.8	4.9	5.0	5.2	5.3	5.4
2.66	5	5.6	5.7	5.8	6.0	6.1	6.2	6.4	6.5	6.6	6.8	6.9	7.1
3.18	6	7.2	7.3	7.5	7.6	7.7	7.9	8.0	8.2	8.3	8.4	8.6	8.7
3.70	7	8.8	9.0	9.1	9.3	9.4	9.5	9.7	9.8	9.9	10.1	10.2	10.4
4.21	8	10.5	10.6	10.8	10.9	11.1	11.2	11.3	11.5	11.6	11.7	11.9	12.0
4.71	9	12.2	12.3	12.4	12.6	12.7	12.8	13.0	13.1	13.2	13.4	13.5	13.7
5.22	10	13.8	13.9	14.1	14.2	14.3	14.5	14.6	14.8	14.9	15.0	15.2	15.3
5.72	11	15.4	15.6	15.7	15.9	16.0	16.1	16.3	16.4	16.5	16.7	16.8	17.0
6.22	12	17.1	17.2	17.4	17.5	17.6	17.8	17.9	18.1	18.2	18.3	18.5	18.6
6.74	13	18.8	18.9	19.0	19.2	19.3	19.5	19.6	19.7	19.9	20.0	20.2	20.3
7.25	14	20.4	20.6	20.7	20.9	21.0	21.1	21.3	21.4	21.6	21.7	21.8	22.0
7.76	15	22.1	22.3	22.4	22.5	22.7	22.8	22.9	22.9	22.9	22.9	22.9	22.9

	TONS	FEET	INCHES	8TH	
TANK CAPACITY AT 100% FULL	22.9	15	5	6	SOUNDING
TANK CAPACITY AT 0.95 FULL	21.8	14	9	4	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.0				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	0	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 25

F.O. WING TANK NO. 17 STBD. FUEL OIL 0.0 FT TRIM FR. NO. 22- 23

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.12	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.74	1	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4
1.45	2	0.5	0.5	0.6	0.6	0.7	0.8	0.8	0.9	1.0	1.0	1.1	1.2
2.03	3	1.3	1.3	1.4	1.5	1.5	1.6	1.7	1.8	1.9	1.9	2.0	2.1
2.53	4	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.3	3.4
3.16	5	3.5	3.5	3.6	3.7	3.7	3.8	3.9	3.9	4.0	4.1	4.1	4.2
3.51	6	4.3	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3
4.01	7	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.1	6.2	6.3	6.4
4.52	8	6.5	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4	7.5	7.6
5.03	9	7.7	7.8	7.9	8.0	8.1	8.2	8.3	8.4	8.4	8.5	8.6	8.7
5.54	10	8.8	8.9	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9
6.04	11	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.8	10.9	11.0
6.55	12	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	12.0	12.1	12.2
7.05	13	12.3	12.4	12.5	12.6	12.7	12.8	12.9	13.0	13.1	13.2	13.3	13.4
7.55	14	13.5	13.6	13.6	13.7	13.8	13.9	14.0	14.1	14.2	14.3	14.4	14.5
8.06	15	14.6	14.7	14.8	14.9	15.0	15.1	15.2	15.2	15.2	15.2	15.2	15.2

	TONS XXXXX GALONS	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	15.2	15	6	4	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	14.5	14	10	4	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.0				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	0	
LOW POINT OF TANK		0	1	4	ABV. B.L.

F.O. WING TANK NO. 18 PORT FUEL OIL 0.0 FT TRIM FR. NO. 22- 23

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.12	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.72	1	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5
1.49	2	0.5	0.6	0.6	0.7	0.7	0.8	0.9	0.9	1.0	1.1	1.2	1.2
2.05	3	1.3	1.4	1.4	1.5	1.6	1.7	1.7	1.8	1.9	2.0	2.1	2.2
2.55	4	2.2	2.3	2.4	2.5	2.6	2.7	2.7	2.8	2.9	3.0	3.1	3.2
3.06	5	3.3	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3
3.56	6	4.4	4.5	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4
4.03	7	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.3	6.4	6.5
4.54	8	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4	7.4	7.5	7.6
5.05	9	7.7	7.8	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8
5.56	10	8.9	9.0	9.1	9.2	9.3	9.4	9.5	9.5	9.6	9.7	9.8	9.9
6.07	11	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	11.0	11.1
6.57	12	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	12.0	12.1	12.2	12.2
7.07	13	12.3	12.4	12.5	12.6	12.7	12.8	12.9	13.0	13.1	13.2	13.3	13.4
7.57	14	13.5	13.6	13.7	13.8	13.9	14.0	14.1	14.2	14.3	14.4	14.5	14.6
7.84	15	14.7	14.8	14.9	15.0	15.1	15.1	15.2	15.2	15.2	15.2	15.2	15.2

	TONS XXXXX GALLONS	FEET	INCHES	8TH	
TANK CAPACITY AT 100% FULL	15.2	15	6	0	
TANK CAPACITY AT 0.95 FULL	14.5	14	9	5	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.0				SOUNDING
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	0	
LOW POINT OF TANK		0	1	4	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 27

ANTI-ROLLING TANK (STBD SOUNDING) FUEL OIL 0.0 FT TRIM FR. NO. 18- 19

CENTER OF GRAVITY	S'D'G FT.	SOUNDING – INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.02	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3
0.64	1	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4
1.22	2	1.5	1.6	1.7	1.8	1.9	2.0	2.2	2.3	2.4	2.5	2.6	2.7
1.75	3	2.9	3.0	3.1	3.4	4.2	4.9	5.7	6.4	7.2	8.0	8.7	9.5
2.56	4	10.2	11.0	11.8	12.5	13.3	14.0	14.8	15.6	16.3	17.1	17.9	18.6
3.46	5	19.4	20.2	20.9	21.7	22.5	23.2	24.0	24.8	25.5	26.3	27.0	27.8
4.01	6	28.6	29.4	30.2	31.0	31.8	32.7	33.5	34.3	35.1	35.9	36.7	37.6
4.54	7	38.4	39.2	40.0	40.8	41.6	42.5	43.3	44.1	44.9	45.7	46.5	47.4
5.06	8	48.2	49.0	49.8	50.6	51.4	52.3	53.1	53.9	54.7	55.5	56.3	57.2
5.57	9	58.0	58.8	59.6	60.4	61.2	62.1	62.9	63.7	64.5	65.3	66.1	67.0
6.08	10	67.8	68.6	69.4	70.2	71.1	71.9	72.7	73.5	74.3	75.1	76.0	76.8
6.59	11	77.6	78.4	79.2	80.0	80.9	81.7	82.5	83.3	84.1	84.9	85.8	86.6
7.09	12	87.4	88.2	89.0	89.8	90.7	91.5	92.3	93.1	93.9	94.8	95.6	96.4
7.60	13	97.2	98.0	98.8	99.7	100.5	101.3	102.1	102.9	103.7	104.6	105.4	106.2
8.11	14	107.0	107.8	108.7	109.5	110.3	111.1	111.9	112.7	113.6	114.4	115.2	116.0
8.61	15	116.8	117.6	118.4	119.3	120.1	120.8	120.8	120.8	120.8	120.8	120.8	120.8

	TONS	FEET	INCHES	8TH	
TANK CAPACITY AT 100% FULL	120.8	15	4	7	
TANK CAPACITY AT 0.95 FULL	114.7	14	9	3	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.0				SOUNDING
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	3	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 28

ANTI-ROLLING TANK (PORT SOUNDING) FUEL OIL 0.0 FT TRIM FR. NO. 18- 19

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.00	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3
0.65	1	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4
1.23	2	1.5	1.6	1.7	1.8	1.9	2.1	2.2	2.3	2.4	2.5	2.6	2.8
1.76	3	2.9	3.0	3.1	3.5	4.3	5.0	5.8	6.5	7.3	8.1	8.8	9.6
2.57	4	10.3	11.1	11.9	12.6	13.4	14.1	14.9	15.7	16.4	17.2	18.0	18.7
3.47	5	19.5	20.3	21.0	21.8	22.6	23.4	24.2	25.0	25.8	26.6	27.5	28.3
4.04	6	29.1	29.9	30.7	31.5	32.4	33.2	34.0	34.8	35.6	36.4	37.3	38.1
4.57	7	38.9	39.7	40.5	41.3	42.2	43.0	43.8	44.6	45.4	46.2	47.1	47.9
5.09	8	48.7	49.5	50.3	51.1	52.0	52.8	53.6	54.4	55.2	56.0	56.9	57.7
5.60	9	58.5	59.3	60.1	60.9	61.8	62.6	63.4	64.2	65.0	65.8	66.7	67.5
6.11	10	68.3	69.1	69.9	70.7	71.6	72.4	73.2	74.0	74.8	75.6	76.5	77.3
6.61	11	78.1	78.9	79.7	80.6	81.4	82.2	83.0	83.8	84.6	85.5	86.3	87.1
7.12	12	87.9	88.7	89.5	90.4	91.2	92.0	92.8	93.6	94.4	95.3	96.1	96.9
7.62	13	97.7	98.5	99.4	100.2	101.0	101.8	102.6	103.4	104.3	105.1	105.9	106.7
8.14	14	107.5	108.3	109.2	110.0	110.8	111.6	112.4	113.2	114.1	114.9	115.7	116.5
8.64	15	117.3	118.1	119.0	119.8	120.6	120.8	120.8	120.8	120.8	120.8	120.8	120.8

	TONS XXXXX	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	120.8	15	4	2	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	114.7	14	8	6	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.0				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	0	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 29

S.W. BALLAST TK. NO. 1 PORT SALT WATER 0.0 FT TRIM FR. NO. 7- 11

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.01	0	0.0	0.1	0.2	0.4	0.5	0.6	0.8	0.9	1.1	1.3	1.4	1.6
0.57	1	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0
1.12	2	4.2	4.4	4.7	4.9	5.1	5.4	5.6	5.8	6.1	6.3	6.5	6.8
1.67	3	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	4	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	5	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	6	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	7	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	8	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	10	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	11	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	12	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	13	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	14	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	15	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	16	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	17	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	18	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	19	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9

	TONS ~~XXXXX~~ GALLONS	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	6.9	2	11	4	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	6.6	2	10	1	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.1				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	3	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 30

S.W. BALLAST TK. NO. 1 STBD — SALT WATER — 0.0 FT TRIM — FR. NO. 7- 11

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES											
		0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.01	0	0.0	0.1	0.2	0.4	0.5	0.6	0.8	0.9	1.1	1.3	1.4	1.6
0.57	1	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0
1.12	2	4.2	4.4	4.7	4.9	5.1	5.4	5.6	5.8	6.1	6.3	6.5	6.8
1.67	3	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	4	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	5	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	6	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	7	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	8	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	10	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	11	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	12	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	13	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	14	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	15	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	16	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	17	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	18	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	19	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	20	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
1.67	21	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9

	TONS	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	6.9	2	11	4	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	6.6	2	10	1	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.3				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	3	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 31

S.W. BALLAST D.B. TK. NO. 2 SALT WATER 0.0 FT TRIM FR. NO. 11- 14

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.00	0	0.0	3.9	7.9	11.9	15.8	19.8	23.8	27.8	31.8	35.9	39.9	43.9
0.50	1	48.0	52.0	56.0	60.1	64.1	68.2	72.2	76.2	80.3	84.3	88.3	92.4
1.00	2	96.4	100.4	104.5	108.5	112.6	116.6	120.6	124.7	128.7	132.8	136.8	140.8
1.50	3	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9
1.50	4	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9
1.50	5	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9
1.50	6	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9
1.50	7	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9
1.50	8	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9
1.50	9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9
1.50	10	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9
1.50	11	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9
1.50	12	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9
1.50	13	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9
1.50	14	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9
1.50	15	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9

	TONS XXXXX GALLONS	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	144.9	3	0	0	
..... TANK CAPACITY AT 0.95 FULL	137.6	2	10	1	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	1.9				SOUNDING
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	0	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 32

S.W. BALLAST D.B. TK. NO. 3 SALT WATER 0.0 FT TRIM FR. NO. 14~ 17

CENTER OF GRAVITY	S'D'G FT.	SOUNDING INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.01	0	1.4	5.2	9.0	12.9	16.7	20.5	24.4	28.2	32.0	35.8	39.7	43.5
0.51	1	47.3	51.2	55.0	58.8	62.6	66.5	70.3	74.1	77.9	81.8	85.6	89.4
1.01	2	93.2	97.1	100.9	104.7	108.6	112.4	116.2	120.0	123.9	127.7	131.5	135.4
1.49	3	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8
1.49	4	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8
1.49	5	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8
1.49	6	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8
1.49	7	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8
1.49	8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8
1.49	9	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8
1.49	10	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8
1.49	11	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8
1.49	12	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8
1.49	13	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8
1.49	14	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8
1.49	15	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8

	TONS XXXXX	FEET	INCHES	8TH	
TANK CAPACITY AT 100% FULL	137.8	2	11	4	SOUNDING
TANK CAPACITY AT 0.95 FULL	130.9	2	9	6	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	5.7				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	3	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 33

S.W. BALLAST D.B. TK. NO. 4 SALT WATER 0.0 FT TRIM FR. NO. 17- 20

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.00	0	0.0	3.8	7.7	11.6	15.4	19.3	23.2	27.0	30.9	34.8	38.7	42.5
0.49	1	46.4	50.3	54.1	58.0	61.9	65.8	69.6	73.5	77.4	81.2	85.1	89.0
0.99	2	92.8	96.7	100.6	104.5	108.3	112.2	116.1	119.9	123.8	127.7	131.5	135.4
1.49	3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3
1.49	4	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3
1.49	5	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3
1.49	6	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3
1.49	7	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3
1.49	8	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3
1.49	9	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3
1.49	10	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3
1.49	11	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3
1.49	12	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3
1.49	13	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3
1.49	14	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3
1.49	15	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3	139.3

	TONS XXXXX GALLONS	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	139.3	3	0	0	
..... TANK CAPACITY AT 0.95 FULL	132.3	2	10	1	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	2.4				SOUNDING
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	0	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 34

S.W. BALLAST D.B. TK. NO. 5 SALT WATER 0.0 FT TRIM FR. NO. 20- 23

CENTER OF GRAVITY	S'D'G FT.	SOUNDING = INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.00	0	0.0	3.0	6.1	9.2	12.3	15.4	18.4	22.0	25.6	29.2	32.8	36.3
0.52	1	39.9	44.0	48.0	52.1	56.1	60.2	64.2	68.3	72.3	76.4	80.4	84.5
1.06	2	88.6	92.6	96.7	100.8	104.9	108.9	113.0	117.1	121.2	125.3	129.3	133.4
1.58	3	137.5	138.3	139.1	139.9	140.7	141.5	142.4	143.2	144.0	144.8	145.0	145.3
1.68	4	145.5	145.7	146.0	146.2	146.5	146.7	147.0	147.0	147.0	147.0	147.0	147.0
1.70	5	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0
1.70	6	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0
1.70	7	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0
1.70	8	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0
1.70	9	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0
1.70	10	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0
1.70	11	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0
1.70	12	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0
1.70	13	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0
1.70	14	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0
1.70	15	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0	147.0

	TONS	FEET	INCHES	BTH	
..... TANK CAPACITY AT 100% FULL	147.0	4	6	0	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	139.6	3	2	4	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	5.3				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	0	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 35

S.W. BALLAST WING TK. NO. 7 SALT WATER 0.0 FT TRIM FR. NO. 14- 15

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.02	0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.4
0.56	1	0.4	0.5	0.6	0.7	0.8	1.0	1.1	1.2	1.4	1.5	1.7	1.8
1.08	2	1.9	2.1	2.2	2.4	2.5	2.7	2.9	3.1	3.2	3.4	3.6	3.8
1.59	3	4.0	4.2	4.3	4.5	4.7	4.9	5.1	5.3	5.5	5.7	5.9	6.1
2.09	4	6.3	6.5	6.7	6.9	7.2	7.4	7.6	7.8	8.0	8.2	8.4	8.7
2.61	5	8.9	9.1	9.3	9.5	9.8	10.0	10.2	10.4	10.7	10.9	11.1	11.3
3.14	6	11.6	11.8	12.0	12.2	12.4	12.7	12.9	13.1	13.3	13.6	13.8	14.0
3.65	7	14.2	14.5	14.7	14.9	15.1	15.4	15.6	15.8	16.0	16.3	16.5	16.7
4.16	8	16.9	17.2	17.4	17.6	17.8	18.0	18.3	18.5	18.7	18.9	19.2	19.4
4.67	9	19.6	19.8	20.1	20.3	20.5	20.7	21.0	21.2	21.4	21.6	21.9	22.1
5.17	10	22.3	22.5	22.8	23.0	23.2	23.4	23.6	23.9	24.1	24.3	24.5	24.8
5.67	11	25.0	25.2	25.4	25.7	25.9	26.1	26.3	26.6	26.8	27.0	27.2	27.5
6.18	12	27.7	27.9	28.1	28.4	28.6	28.8	29.0	29.2	29.5	29.7	29.9	30.1
6.68	13	30.4	30.6	30.8	31.0	31.3	31.5	31.7	31.9	32.2	32.4	32.6	32.8
7.18	14	33.1	33.3	33.5	33.7	34.0	34.2	34.4	34.6	34.9	35.1	35.3	35.5
7.69	15	35.8	36.0	36.2	36.4	36.7	36.9	37.1	37.3	37.4	37.4	37.4	37.4

	TONS ~~XXXXX~~ GALLONS	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	37.4	15	7	4	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	35.6	14	11	1	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.0				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	4	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 36

S.W. BALLAST WING TK. NO. 8 SALT WATER 0.0 FT TRIM FR. NO. 16- 18

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.05	0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.4	0.5	0.6	0.8	0.9
0.75	1	1.1	1.4	1.6	1.8	2.0	2.3	2.5	2.7	3.0	3.2	3.4	3.7
1.36	2	3.9	4.2	4.5	4.8	5.0	5.3	5.6	5.9	6.1	6.4	6.7	7.0
1.92	3	7.3	7.6	7.9	8.2	8.5	8.7	9.0	9.3	9.6	9.9	10.2	10.5
2.45	4	10.8	11.1	11.4	11.7	12.0	12.3	12.6	12.9	13.2	13.5	13.8	14.1
2.99	5	14.4	14.7	15.0	15.3	15.6	15.9	16.2	16.5	16.8	17.1	17.4	17.7
3.50	6	18.0	18.3	18.6	18.9	19.2	19.5	19.8	20.1	20.4	20.7	21.0	21.2
4.01	7	21.5	21.8	22.1	22.4	22.7	23.0	23.3	23.6	23.9	24.2	24.5	24.8
4.52	8	25.1	25.4	25.7	26.0	26.3	26.6	26.9	27.2	27.5	27.8	28.1	28.4
5.02	9	28.7	29.0	29.3	29.6	29.9	30.2	30.5	30.8	31.1	31.4	31.7	32.0
5.53	10	32.3	32.6	32.9	33.2	33.5	33.8	34.1	34.4	34.7	35.0	35.3	35.6
6.03	11	35.9	36.2	36.5	36.8	37.1	37.4	37.7	38.0	38.3	38.6	38.9	39.2
6.54	12	39.5	39.8	40.1	40.4	40.7	41.0	41.3	41.6	41.9	42.2	42.5	42.8
7.04	13	43.1	43.4	43.7	44.0	44.3	44.5	44.8	45.1	45.4	45.7	46.0	46.3
7.54	14	46.6	46.9	47.2	47.5	47.8	48.1	48.4	48.7	49.0	49.3	49.6	49.9

	TONS XXXXX	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	49.9	14	11	0	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	47.4	14	2	5	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.0				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	1	0	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 37

S.W. BALLAST WING TK. NO. 9 SALT WATER 0.0 FT TRIM FR. NO. 16- 18

CENTER OF GRAVITY	S'D'G FT.	SOUNDING = INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.11	0	0.0	0.0	0.1	0.1	0.1	0.3	0.4	0.5	0.6	0.8	0.9	1.1
0.80	1	1.4	1.6	1.8	2.0	2.3	2.5	2.7	3.0	3.2	3.4	3.7	3.9
1.40	2	4.2	4.5	4.8	5.0	5.3	5.6	5.9	6.2	6.4	6.7	7.0	7.3
1.96	3	7.6	7.9	8.2	8.5	8.8	9.0	9.3	9.6	9.9	10.2	10.5	10.8
2.50	4	11.1	11.4	11.7	12.0	12.3	12.6	12.9	13.2	13.5	13.8	14.1	14.4
3.03	5	14.7	15.0	15.3	15.6	15.9	16.2	16.5	16.8	17.1	17.4	17.7	18.0
3.54	6	18.3	18.6	18.9	19.2	19.5	19.8	20.1	20.4	20.7	21.0	21.3	21.5
4.05	7	21.8	22.1	22.4	22.7	23.0	23.3	23.6	23.9	24.2	24.5	24.8	25.1
4.56	8	25.4	25.7	26.0	26.3	26.6	26.9	27.2	27.5	27.8	28.1	28.4	28.7
5.07	9	29.0	29.3	29.6	29.9	30.2	30.5	30.8	31.1	31.4	31.7	32.0	32.3
5.57	10	32.6	32.9	33.2	33.5	33.8	34.1	34.4	34.7	35.0	35.3	35.6	35.9
6.07	11	36.2	36.5	36.8	37.1	37.4	37.7	38.0	38.3	38.6	38.9	39.2	39.5
6.58	12	39.8	40.1	40.4	40.7	41.0	41.3	41.6	41.9	42.2	42.5	42.8	43.1
7.08	13	43.4	43.7	44.0	44.3	44.6	44.8	45.1	45.4	45.7	46.0	46.3	46.6
7.58	14	46.9	47.2	47.5	47.8	48.1	48.4	48.7	49.0	49.3	49.6	49.9	49.9

	TONS ~~GALONS~~	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	49.9	14	9	7	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	47.4	14	1	5	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.1				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	2	0	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 34

S.W. BALLAST WING TK. NO. 10 SALT WATER 0.0 FT TRIM FR. NO. 18 - 20

CENTER OF GRAVITY	S'D'G FT.	SOUNDING – INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.00	0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.4	0.5
0.63	1	0.5	0.6	0.8	0.9	1.1	1.2	1.4	1.5	1.7	1.8	2.0	2.1
1.18	2	2.3	2.4	2.6	2.8	2.9	3.1	3.3	3.5	3.7	3.9	4.1	4.3
1.70	3	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	6.0	6.2	6.4	6.6
2.19	4	6.8	7.0	7.2	7.4	7.6	7.8	8.0	8.2	8.4	8.6	8.8	9.0
2.67	5	9.2	9.4	9.6	9.8	10.0	10.2	10.4	10.6	10.8	11.0	11.2	11.4
3.14	6	11.6	11.8	12.0	12.2	12.4	12.7	12.9	13.1	13.3	13.6	13.8	14.0
3.65	7	14.2	14.5	14.7	14.9	15.1	15.4	15.6	15.8	16.0	16.3	16.5	16.7
4.16	8	16.9	17.2	17.4	17.6	17.8	18.0	18.3	18.5	18.7	18.9	19.2	19.4
4.67	9	19.6	19.8	20.1	20.3	20.5	20.7	21.0	21.2	21.4	21.6	21.9	22.1
5.17	10	22.3	22.5	22.8	23.0	23.2	23.4	23.6	23.9	24.1	24.3	24.5	24.8
5.67	11	25.0	25.2	25.4	25.7	25.9	26.1	26.3	26.6	26.8	27.0	27.2	27.5
6.18	12	27.7	27.9	28.1	28.4	28.6	28.8	29.0	29.2	29.5	29.7	29.9	30.1
6.68	13	30.4	30.6	30.8	31.0	31.3	31.5	31.7	31.9	32.2	32.4	32.6	32.8
7.18	14	33.1	33.3	33.5	33.7	34.0	34.2	34.4	34.6	34.9	35.1	35.3	35.5
7.69	15	35.8	36.0	36.2	36.4	36.7	36.9	37.1	37.3	37.4	37.4	37.4	37.4

	TONS ~~LONG TONS~~	FEET	INCHES	8TH	
TANK CAPACITY AT 100% FULL	37.4	15	7	4	SOUNDING
TANK CAPACITY AT 0.95 FULL	35.6	14	11	1	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.0				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	0	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 39

S.W. BALLAST WING TK. NO. 11 SALT WATER 0.0 FT TRIM FR. NO. 18- 20

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.02	0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.4
0.56	1	0.4	0.5	0.6	0.7	0.8	0.9	1.1	1.2	1.4	1.5	1.6	1.8
1.07	2	1.9	2.1	2.2	2.4	2.5	2.7	2.8	3.0	3.2	3.4	3.6	3.7
1.58	3	3.9	4.1	4.3	4.5	4.7	4.9	5.0	5.2	5.4	5.6	5.8	6.0
2.08	4	6.2	6.5	6.7	6.9	7.1	7.3	7.5	7.7	7.9	8.2	8.4	8.6
2.60	5	8.8	9.0	9.2	9.5	9.7	9.9	10.1	10.3	10.6	10.8	11.0	11.2
3.12	6	11.5	11.7	11.9	12.1	12.3	12.6	12.8	13.0	13.2	13.5	13.7	13.9
3.63	7	14.1	14.4	14.6	14.8	15.0	15.2	15.5	15.7	15.9	16.1	16.4	16.6
4.14	8	16.8	17.0	17.3	17.5	17.7	17.9	18.2	18.4	18.6	18.8	19.1	19.3
4.65	9	19.5	19.7	20.0	20.2	20.4	20.6	20.8	21.1	21.3	21.5	21.7	22.0
5.15	10	22.2	22.4	22.6	22.9	23.1	23.3	23.5	23.8	24.0	24.2	24.4	24.7
5.65	11	24.9	25.1	25.3	25.6	25.8	26.0	26.2	26.4	26.7	26.9	27.1	27.3
6.16	12	27.6	27.8	28.0	28.2	28.5	28.7	28.9	29.1	29.4	29.6	29.8	30.0
6.66	13	30.3	30.5	30.7	30.9	31.2	31.4	31.6	31.8	32.1	32.3	32.5	32.7
7.16	14	32.9	33.2	33.4	33.6	33.8	34.1	34.3	34.5	34.7	35.0	35.2	35.4
7.67	15	35.6	35.9	36.1	36.3	36.5	36.8	37.0	37.2	37.4	37.4	37.4	37.4

	TONS ~~LONG~~	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	37.4	15	8	0	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	35.6	14	11	5	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.0				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	4	
LOW POINT OF TANK		0	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 40

S.W. BALLAST TANK - STBD SALT WATER 0.0 FT TRIM FR. NO. 16- 17

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
3.01	0	0.1	0.6	1.0	1.5	1.9	2.4	2.8	3.3	3.7	4.1	4.6	5.0
3.51	1	5.5	5.9	6.4	6.8	7.3	7.7	8.2	8.6	9.1	9.5	10.0	10.4
4.01	2	10.9	11.3	11.8	12.2	12.7	13.1	13.5	14.0	14.4	14.9	15.3	15.8
4.51	3	16.2	16.7	17.1	17.6	18.0	18.5	18.9	19.4	19.8	20.3	20.7	21.2
5.01	4	21.6	22.1	22.5	23.0	23.4	23.9	24.3	24.8	25.2	25.7	26.1	26.6
5.51	5	27.0	27.5	27.9	28.3	28.8	29.2	29.7	30.1	30.6	31.0	31.5	31.9
6.01	6	32.4	32.8	33.3	33.7	34.2	34.6	35.1	35.5	36.0	36.4	36.9	37.3
6.51	7	37.7	38.2	38.6	39.1	39.5	40.0	40.4	40.9	41.3	41.8	42.2	42.7
7.01	8	43.1	43.6	44.0	44.5	44.9	45.4	45.8	46.2	46.7	47.1	47.6	48.0
7.51	9	48.5	48.9	49.4	49.8	50.2	50.7	51.1	51.6	52.0	52.5	52.9	53.4
8.00	10	53.8	54.2	54.7	55.1	55.6	56.0	56.5	56.9	57.4	57.8	58.2	58.7
8.50	11	59.1	59.6	60.0	60.5	60.9	61.4	61.8	62.2	62.7	63.1	63.6	64.0
8.99	12	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5

	TONS	FEET	INCHES	BTH	
..... TANK CAPACITY AT 100% FULL	64.5	12	0	0	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	61.2	11	4	5	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.8				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	3	
LOW POINT OF TANK		3	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 41

S.W. BALLAST TANK - PORT — SALT WATER — 0.0 FT TRIM — FR. NO. 16- 17

CENTER OF GRAVITY	S'D'G FT.	SOUNDING IN INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
3.01	0	0.1	0.6	1.0	1.5	1.9	2.4	2.8	3.3	3.7	4.1	4.6	5.0
3.51	1	5.5	5.9	6.4	6.8	7.3	7.7	8.2	8.6	9.1	9.5	10.0	10.4
4.01	2	10.9	11.3	11.8	12.2	12.7	13.1	13.5	14.0	14.4	14.9	15.3	15.8
4.51	3	16.2	16.7	17.1	17.6	18.0	18.5	18.9	19.4	19.8	20.3	20.7	21.2
5.01	4	21.6	22.1	22.5	23.0	23.4	23.9	24.3	24.8	25.2	25.7	26.1	26.6
5.51	5	27.0	27.5	27.9	28.3	28.8	29.2	29.7	30.1	30.6	31.0	31.5	31.9
6.01	6	32.4	32.8	33.3	33.7	34.2	34.6	35.1	35.5	36.0	36.4	36.9	37.3
6.51	7	37.7	38.2	38.6	39.1	39.5	40.0	40.4	40.9	41.3	41.8	42.2	42.7
7.01	8	43.1	43.6	44.0	44.5	44.9	45.4	45.9	46.3	46.8	47.2	47.7	48.1
7.52	9	48.6	49.0	49.5	49.9	50.4	50.9	51.3	51.8	52.2	52.7	53.1	53.6
8.02	10	54.0	54.5	54.9	55.4	55.8	56.3	56.8	57.2	57.7	58.1	58.6	59.0
8.53	11	59.5	59.9	60.4	60.8	61.3	61.7	62.2	62.6	63.1	63.6	64.0	64.5

	TONS XXXXXXXXX	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	64.5	11	11	0	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	61.2	11	3	7	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	1.1				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	3	
LOW POINT OF TANK		3	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 42

S.W. BALLAST TANK - STBD SALT WATER 0.0 FT TRIM FR. NO. 17- 18

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
3.00	0	0.0	0.4	0.8	1.3	1.7	2.2	2.6	3.1	3.5	4.0	4.4	4.9
3.49	1	5.3	5.8	6.2	6.7	7.1	7.6	8.0	8.5	8.9	9.4	9.8	10.2
3.99	2	10.7	11.1	11.6	12.0	12.5	12.9	13.4	13.8	14.3	14.7	15.2	15.6
4.49	3	16.1	16.5	17.0	17.4	17.9	18.3	18.8	19.2	19.7	20.1	20.6	21.0
4.99	4	21.5	21.9	22.3	22.8	23.2	23.7	24.1	24.6	25.0	25.5	25.9	26.4
5.49	5	26.8	27.3	27.7	28.2	28.6	29.1	29.5	30.0	30.4	30.9	31.3	31.8
5.99	6	32.2	32.7	33.1	33.6	34.0	34.4	34.9	35.3	35.8	36.2	36.7	37.1
6.49	7	37.6	38.0	38.5	38.9	39.4	39.8	40.3	40.7	41.2	41.6	42.1	42.5
6.99	8	43.0	43.4	43.9	44.3	44.8	45.2	45.7	46.1	46.6	47.0	47.5	47.9
7.50	9	48.4	48.9	49.3	49.8	50.2	50.7	51.1	51.6	52.0	52.5	52.9	53.4
8.00	10	53.8	54.3	54.7	55.2	55.6	56.1	56.5	57.0	57.5	57.9	58.4	58.8
8.51	11	59.3	59.7	60.2	60.6	61.1	61.5	62.0	62.4	62.9	63.3	63.8	64.2

	TONS XXXXX	FEET	INCHES	BTH	
..... TANK CAPACITY AT 100% FULL	64.5	11	11	3	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	61.2	11	4	2	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.3				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	0	
LOW POINT OF TANK		3	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 43

S.W. BALLAST TANK - PORT — SALT WATER — 0.0 FT TRIM — FR. NO. 17- 18

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
3.01	0	0.1	0.6	1.0	1.5	1.9	2.4	2.8	3.3	3.7	4.1	4.6	5.0
3.51	1	5.5	5.9	6.4	6.8	7.3	7.7	8.2	8.6	9.1	9.5	10.0	10.4
4.01	2	10.9	11.3	11.8	12.2	12.7	13.1	13.5	14.0	14.4	14.9	15.3	15.8
4.51	3	16.2	16.7	17.1	17.6	18.0	18.5	18.9	19.4	19.8	20.3	20.7	21.2
5.01	4	21.6	22.1	22.5	23.0	23.4	23.9	24.3	24.8	25.2	25.7	26.1	26.6
5.51	5	27.0	27.5	27.9	28.3	28.8	29.2	29.7	30.1	30.6	31.0	31.5	31.9
6.01	6	32.4	32.8	33.3	33.7	34.2	34.6	35.1	35.5	36.0	36.4	36.9	37.3
6.51	7	37.7	38.2	38.6	39.1	39.5	40.0	40.4	40.9	41.3	41.8	42.2	42.7
7.01	8	43.1	43.6	44.0	44.5	44.9	45.4	45.8	46.2	46.7	47.1	47.6	48.0
7.51	9	48.5	48.9	49.4	49.8	50.2	50.7	51.1	51.6	52.0	52.5	52.9	53.4
8.00	10	53.8	54.2	54.7	55.1	55.6	56.0	56.5	56.9	57.4	57.8	58.2	58.7
8.50	11	59.1	59.6	60.0	60.5	60.9	61.4	61.8	62.2	62.7	63.1	63.6	64.0
8.99	12	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5

	TONS	FEET	INCHES	8TH	
TANK CAPACITY AT 100% FULL	64.5	12	0	0	SOUNDING
TANK CAPACITY AT 0.95 FULL	61.2	11	4	5	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	1.3				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	3	
LOW POINT OF TANK		3	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 44

S.W. BALLAST HOLD TK. SALT WATER 0.0 FT TRIM FR. NO. 18- 20

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
3.00	0	0.0	2.2	4.5	6.7	9.0	11.3	13.5	15.8	18.1	20.3	22.6	24.8
3.49	1	27.1	29.4	31.6	33.9	36.2	38.4	40.7	42.9	45.2	47.5	49.7	52.0
3.99	2	54.3	56.5	58.8	61.0	63.3	65.6	67.8	70.1	72.4	74.6	76.9	79.1
4.49	3	81.4	83.7	85.9	88.2	90.5	92.7	95.0	97.2	99.5	101.8	104.0	106.3
4.99	4	108.6	110.8	113.1	115.4	117.6	119.9	122.1	124.4	126.7	128.9	131.2	133.5
5.49	5	135.7	138.0	140.2	142.5	144.8	147.0	149.3	151.6	153.8	156.1	158.4	160.6
5.99	6	162.9	165.1	167.4	169.7	171.9	174.2	176.5	178.7	181.0	183.2	185.5	187.8
6.49	7	190.0	192.3	194.6	196.8	199.1	201.3	203.6	205.9	208.1	210.4	212.7	214.9
6.99	8	217.2	219.4	221.7	224.0	226.2	228.5	230.8	233.0	235.3	237.5	239.8	242.1
7.49	9	244.3	246.6	248.9	251.1	253.4	255.6	257.9	260.2	262.4	264.7	267.0	269.2
7.99	10	271.5	273.7	276.0	278.3	280.5	282.8	285.1	287.3	289.6	291.9	294.1	296.4
8.49	11	298.6	300.9	303.2	305.4	307.7	310.0	312.2	314.5	316.8	319.0	321.3	323.5
8.99	12	325.8	325.8	325.8	325.8	325.8	325.8	325.8	325.8	325.8	325.8	325.8	325.8

	TONS XXXXXs	FEET	INCHES	8TH	
TANK CAPACITY AT 100% FULL	325.8	12	0	0	SOUNDING
TANK CAPACITY AT 0.95 FULL	309.5	11	4	6	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	3.6				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	0	
LOW POINT OF TANK		3	0	0	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 45

S.W. BALLAST TANK PORT — SALT WATER — 0.0 FT TRIM — FR. NO. 23- 27

CENTER OF GRAVITY	S'D'G FT.	SOUNDING IN INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
1.59	0	0.1	0.1	0.2	0.2	0.4	0.6	0.7	0.9	1.1	1.3	1.4	1.6
2.35	1	1.8	2.0	2.1	2.3	2.6	3.0	3.3	3.6	4.0	4.3	4.7	5.0
3.08	2	5.4	5.7	6.0	6.4	6.7	7.1	7.4	7.8	8.1	8.4	8.8	9.1
3.74	3	9.5	10.0	10.5	11.1	11.6	12.2	12.7	13.3	13.8	14.4	14.9	15.5
4.35	4	16.0	16.6	17.1	17.7	18.3	19.0	19.7	20.4	21.1	21.7	22.4	23.1
4.96	5	23.8	24.5	25.2	25.9	26.5	27.2	27.9	28.6	29.3	29.9	30.6	31.3
5.55	6	32.0	32.7	33.4	34.0	34.7	35.4	36.0	36.7	37.4	38.0	38.7	39.3
6.08	7	40.0	40.7	41.3	42.0	42.7	43.3	44.0	44.7	45.3	46.0	46.6	47.3
6.59	8	48.0	48.6	49.3	50.0	50.6	51.3	51.9	52.5	53.2	53.8	54.5	55.1
7.09	9	55.8	56.4	57.1	57.7	58.4	59.0	59.7	60.3	61.0	61.6	62.2	62.9
7.60	10	63.5	64.2	64.8	65.5	66.1	66.8	67.4	68.1	68.7	69.4	70.0	70.7
8.10	11	71.3	71.9	72.6	73.2	73.9	74.5	75.2	75.8	76.5	77.1	77.8	78.4
8.60	12	79.0	79.7	80.3	81.0	81.6	82.3	82.9	83.6	84.2	84.9	85.5	86.1
9.10	13	86.8	87.4	88.1	88.7	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9

	TONS ~~LONG~~	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	88.9	13	3	1	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	84.4	12	8	2	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.1				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	2	3	
LOW POINT OF TANK		1	6	4	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 46

S.W. BALLAST TANK STBD. SALT WATER 0.0 FT TRIM FR. NO. 23- 27

CENTER OF GRAVITY	S'D'G FT.	SOUNDING = INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
1.59	0	0.1	0.1	0.2	0.2	0.3	0.5	0.7	0.9	1.0	1.2	1.4	1.6
2.93	1	1.7	1.9	2.1	2.2	2.5	2.8	3.1	3.4	3.7	4.1	4.4	4.7
3.03	2	5.0	5.4	5.7	6.0	6.3	6.6	7.0	7.3	7.7	8.1	8.5	8.8
3.70	3	9.2	9.6	10.3	10.9	11.5	12.1	12.6	13.2	13.7	14.2	14.8	15.3
4.34	4	15.8	16.4	16.9	17.5	18.1	18.8	19.5	20.1	20.8	21.5	22.2	22.8
4.94	5	23.5	24.0	24.7	25.4	26.1	26.8	27.5	28.2	28.9	29.6	30.3	31.0
5.54	6	31.8	32.4	33.1	33.8	34.5	35.2	35.9	36.6	37.3	38.0	38.7	39.4
6.09	7	40.1	40.8	41.5	42.2	42.9	43.6	44.3	45.0	45.7	46.4	47.1	47.8
6.61	8	48.5	49.2	49.9	50.6	51.3	52.0	52.7	53.4	54.1	54.8	55.5	56.2
7.14	9	56.9	57.6	58.3	59.0	59.7	60.4	61.1	61.8	62.5	63.2	63.9	64.6
7.66	10	65.4	66.1	66.8	67.5	68.2	68.9	69.6	70.3	71.0	71.7	72.4	73.1
8.19	11	73.8	74.5	75.2	75.9	76.6	77.3	78.0	78.7	79.4	80.1	80.8	81.5
8.70	12	82.2	82.9	83.6	84.3	85.0	85.7	86.4	87.1	87.8	88.5	89.2	89.9
9.22	13	90.6	91.3	92.0	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7

	TONS ~~XXXXX~~ GALLONS	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	92.7	13	3	0	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	88.1	12	8	3	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.1				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	2	1	
LOW POINT OF TANK		1	6	4	ABV. B.L.

S.W. BALLAST STERN TANK — SALT WATER — 0.0 FT TRIM — FR. NO. 27- 34

CENTER OF GRAVITY	S'D'G FT.	SOUNDING IN INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
6.32	0	0.1	0.3	0.4	0.5	0.6	0.7	0.9	1.0	1.4	1.9	2.5	3.0
6.93	1	3.5	4.0	4.6	5.1	5.6	6.1	6.7	7.2	8.1	9.2	10.3	11.4
7.68	2	12.4	13.5	14.6	15.7	16.7	17.8	18.9	20.0	21.0	22.1	23.2	24.3
8.34	3	25.3	26.4	27.5	28.6	29.7	30.7	31.8	32.9	34.1	35.5	36.8	38.1
8.96	4	39.5	40.8	42.1	43.5	44.8	46.1	47.4	48.8	50.1	51.4	52.8	53.9
9.50	5	55.1	56.2	57.3	58.5	59.6	60.7	61.9	63.0	64.1	65.2	66.4	67.5
9.99	6	68.6	69.8	70.9	72.0	73.2	74.3	75.4	76.6	77.7	78.9	80.0	81.1
10.47	7	82.3	83.4	84.6	85.7	86.9	88.0	89.1	90.3	91.4	92.6	93.7	94.8
10.96	8	96.0	97.1	98.3	99.4	100.6	101.7	102.8	104.0	104.3	104.3	104.3	104.3

	TONS XXXXXXs	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	104.3	8	7	2	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	99.0	8	2	6	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.2				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	1	4	
LOW POINT OF TANK		6	3	2	ABV. B.L.

SHIP NO. DWG. NO. 100-121 LONG TONS DATE 07-30-76 PAGE 48

SLUDGE TANK SALT WATER 0.0 FT TRIM FR. NO. 14- 15

CENTER OF GRAVITY	S'D'G FT.	SOUNDING - INCHES 0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
0.02	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.3
0.70	1	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.3	1.4	1.5	1.6
1.27	2	1.7	1.8	1.9	2.1	2.2	2.3	2.5	2.6	2.7	2.9	3.0	3.1
1.80	3	3.3	3.4	3.5	3.7	3.8	3.9	4.1	4.2	4.4	4.5	4.6	4.8
2.31	4	4.9	5.0	5.2	5.3	5.5	5.6	5.7	5.9	6.0	6.2	6.3	6.4
2.81	5	6.6	6.7	6.9	7.0	7.1	7.3	7.4	7.6	7.7	7.8	8.0	8.1
3.30	6	8.3	8.4	8.5	8.7	8.8	8.9	9.1	9.2	9.4	9.5	9.6	9.8
3.78	7	9.9	10.1	10.2	10.4	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6
4.29	8	11.7	11.9	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.3
4.79	9	13.5	13.6	13.8	13.9	14.1	14.2	14.4	14.5	14.7	14.8	15.0	15.1
5.30	10	15.3	15.4	15.6	15.7	15.9	16.0	16.2	16.3	16.5	16.6	16.8	16.9
5.80	11	17.1	17.2	17.4	17.5	17.7	17.8	18.0	18.1	18.3	18.4	18.6	18.7
6.30	12	18.9	19.0	19.2	19.3	19.5	19.6	19.8	19.9	20.1	20.2	20.4	20.5
6.81	13	20.7	20.8	21.0	21.1	21.3	21.4	21.6	21.7	21.9	22.0	22.2	22.3
7.31	14	22.5	22.6	22.8	22.9	23.1	23.2	23.4	23.5	23.7	23.8	24.0	24.1
7.81	15	24.3	24.4	24.6	24.7	24.9	25.0	25.0	25.0	25.0	25.0	25.0	25.0

	TONS ~~XXXX~~	FEET	INCHES	8TH	
..... TANK CAPACITY AT 100% FULL	25.0	15	4	4	SOUNDING
..... TANK CAPACITY AT 0.95 FULL	23.7	14	8	1	SOUNDING
TANK CAPACITY REMAINING AT LOWEST POINT OF SUCTION	0.1				
LOWEST POINT OF SOUNDING ABOVE LOWEST POINT OF TANK		0	0	3	
LOW POINT OF TANK		0	0	0	ABV. B.L.

APPENDIX
B

CURVES OF STATICAL STABILITY CALCULATION

APPENDIX B

INTACT CURVES OF STATICAL STABILITY

The original Curves of Intact Statical Stability drawn up by J. J. Henry, Co., Inc. have been modified in accordance with the change in GM due to the weight changes. The new values for the righting arm follow in this appendix, along with the original values produced by J. J. Henry, Co., Inc. The original values were obtained from the "Ship Hull Characteristics Program, (SHCP)". The center well was included in these calculations.

The weight changes which took place affect the righting arm in two ways. The first is the change in GM. The second is the change in displacement due to the weight changes, which will have the effect of changing the righting arm as can be seen in the cross curves of stability. Both these factors were taken into account in calculating the new righting arms, however, an additional factor was included, which is not caused by the weight changes. The change in draft due to heel affects the amount of water in the center well. Treating this water as an added weight in effect changes the displacement of the ship.

The method by which the new values were obtained is as follows. The change in GM is multiplied by the sine of the angle of heel, to get the change in righting arm. A rise in the center of gravity (decrease in GM) will result in a shorter righting arm. The change in weight is constant for all conditions (38 T) and the corresponding change in righting arm was taken off the cross curves of stability. The amount of water in the center well was figured graphically using the drafts

in the original T&S book and this change in weight was used to figure the change in righting arm as above.

As an example, take Capacity Condition at 40^{o} heel:

KG original	=	11.458 ft.
KG new	=	11.64 ft.
Sin 30^{o}	=	0.643 ft.

$\Delta RA = (11.64 - 11.458)\ (.643) = .12$ ft. (KG effect)

The added 38 tons decreases the right arm by .1 ft., from Cross Curves of Stability (Displacement effect).

Graphically it was determined that an additional 32 tons enter the center well decreasing the righting arm by .1 ft. (change in draft effect).

Finally, the total change in righting arm is:

$.12 + .1 + .1 = .32$

Note that all contributions cause a decrease in righting arm. The original righting arm was 2.161 ft. The new righting arm will be $2.161 - .32 = 1.841$ ft.

REVISED RIGHTING ARMS

CONDITION	HEEL	RA
CAPACITY	0	0.0
	5	.921
	10	1.636
	15	1.870
	20	1.963
	30	1.91
	40	1.841
	50	1.302
	60	.509
	70	-3.05
FULL LOAD	0	0.0
	5	1.150
	10	2.273
	15	3.400
	20	4.176
	30	4.274
	40	3.490
	50	2.218
	60	0.589
	70	-1.19
IA	0	0.0
	5	1.280
	10	2.565
	15	3.800

CONDITION	HEEL	RA
IA	20	4.779
	30	4.744
	40	3.680
	50	2.201
	60	0.356
	70	-1.343
IIA	0	0.0
	5	1.101
	10	2.210
	15	3.054
	20	3.419
	30	3.381
	40	2.920
	50	2.018
	60	.860
	70	- .369
IIIA	0	0.0
	5	.984
	10	1.714
	15	2.092
	20	2.216
	30	1.928
	40	1.396
	50	1.542

CONDITION	HEEL	RA
IIIA	60	-0.505
	70	-1.627
IB	0	0.0
	5	1.066
	10	2.158
	15	3.075
	20	3.448
	30	3.481
	40	3.093
	50	2.142
	60	0.949
	70	-0.357
IC	0	0.0
	5	1.050
	10	2.109
	15	3.100
	20	3.598
	30	3.643
	40	3.004
	50	1.793
	60	0.434
	70	-1.154

SHIP= OCEAN ENGINEERING PLATFORM SERIAL NUMBER= 1 DATE= 03

INTACT CURVES OF STATICAL STABILITY

DISPL	LCG	HEEL	RA	TCB	VCB	DRAFT	TRIM
3104.800	-15.750	0.000	0.000	0.000	5.818	10.350	8.147
		5.000	0.984	1.582	5.887	10.358	8.238
OPERATING IIA		10.000	1.777	2.972	6.068	10.463	8.913
		15.000	2.272	4.063	6.307	10.752	10.216
		20.000	2.462	4.853	6.555	11.249	11.933
		30.000	2.315	5.929	7.050	12.598	16.977
		40.000	1.730	6.601	7.514	14.242	24.788
		50.000	*****	*****	*****	*****	*****
		60.000	-0.108	7.319	8.339	19.312	56.207
		70.000	-1.246	7.462	8.647	25.019	92.961
2923.000	-4.820	0.000	0.000	0.000	5.303	9.953	2.588
		5.000	1.099	1.716	5.378	9.949	2.600
OPERATING IB		10.000	2.224	3.454	5.607	9.936	2.622
		15.000	3.169	5.007	5.948	10.001	2.911
		20.000	3.649	6.102	6.291	10.291	3.589
		30.000	3.864	7.590	6.972	11.182	6.186
		40.000	3.406	8.477	7.586	12.160	10.666
		50.000	*****	*****	*****	*****	*****
		60.000	1.328	9.318	8.544	14.955	28.214
		70.000	-0.043	9.481	8.892	18.083	48.501
2748.000	-3.210	0.000	0.000	0.000	5.007	9.433	1.928
		5.000	1.075	1.821	5.087	9.429	1.931
OPERATING IC		10.000	2.175	3.659	5.329	9.412	1.926
		15.000	3.235	5.448	5.724	9.410	1.991
		20.000	3.798	6.746	6.130	9.595	2.377
		30.000	3.926	8.390	6.880	10.208	4.300
		40.000	3.237	9.302	7.510	10.784	7.807
		50.000	*****	*****	*****	*****	*****
		60.000	0.733	10.190	8.522	12.130	22.237
		70.000	-0.840	10.364	8.892	13.602	39.024

SHIP- OCEAN ENGINEERING PLATFORM SERIAL NUMBER- 0 DATE-04-03-72

INTACT CURVES OF STATICAL STABILITY

DISPL	LCG	HEEL	RA	TCB	VCB	DRAFT	TRIM
3599.000	-4.010	0.000	0.000	0.000	6.374	12.042	1.877
		5.000	0.956	1.409	6.435	12.039	1.894
CAPACITY COND.		10.000	1.716	2.601	6.588	12.150	2.273
		15.000	2.012	3.345	6.751	12.572	3.236
		20.000	2.163	3.947	6.941	13.181	4.657
		30.000	**********	**********	**********	15.068	7.318
		40.000	2.161	5.756	7.961	17.073	14.916
		50.000	1.642	6.201	8.401	20.134	23.769
		60.000	0.869	6.443	8.743	24.873	37.445
		70.000	-0.035	6.577	9.027	33.809	63.186
2501.000	0.040	0.000	0.000	0.000	4.588	8.704	0.733
		5.000	1.158	1.983	4.674	8.694	0.692
FULL LOAD		10.000	2.340	3.984	4.938	8.671	0.640
		15.000	3.550	6.000	5.385	8.622	0.515
		20.000	4.379	7.632	5.895	8.649	0.464
		30.000	4.560	9.492	6.740	8.820	1.254
		40.000	3.726	10.451	7.401	8.806	3.250
		50.000	*****	*****	*****	*****	*****
		60.000	0.893	11.413	8.501	8.069	12.755
		70.000	-0.871	11.604	8.909	7.159	23.983
2229.000	-4.980	0.000	0.000	0.000	4.175	7.797	2.962
		5.000	1.293	2.214	4.271	7.788	2.924
OPERATING IA		10.000	2.611	4.445	4.565	7.766	2.875
		15.000	3.931	6.665	5.057	7.709	2.764
		20.000	4.940	8.565	5.651	7.625	2.821
		30.000	4.969	10.485	6.519	7.443	3.862
		40.000	3.838	11.388	7.140	6.999	6.088
		50.000	**********	**********	**********	6.343	8.815
		60.000	0.554	12.347	8.251	4.589	17.436
		70.000	-1.389	12.552	8.692	1.645	31.371
2865.000	-11.740	0.000	0.000	0.000	5.340	9.791	5.217
		5.000	1.139	1.726	5.416	9.788	5.232
OPERATING IA		10.000	2.286	3.454	5.643	9.786	5.325
		15.000	3.174	4.922	5.965	9.901	5.942
		20.000	3.639	5.974	6.294	10.225	6.994
		30.000	3.793	7.351	6.925	11.185	10.521
		40.000	3.290	8.149	7.476	12.275	16.224
		50.000	**********	**********	**********	13.744	23.527
		60.000	1.309	8.962	8.407	15.292	39.140
		70.000	-0.001	9.122	8.748	18.622	65.794

DISPLACEMENTS AND CENTERS CORRECTED FOR WELL

	DISPL.	VCG	V M.T.	L.C.G.	L.M.T.	F.S
CAPACITY COND.						
	3461.8	10.57	36588	133.94	483633	4403
WELL	178	6.08	1082	130.00	23140	312
	3639.8		37670		486773	4715
			4715			
		11.64	42385			
FULL LOAD COND.						
	2414	12.84	30996	129.59	312830	4403
WELL	128	4.39	562	130.00	16640	312
	2542		31558			4715
			4715			
		14.27	36273			
OPERATING COND IA						
	2152.8	13.37	28780	134.77	290106	4096
WELL	116	3.97	460	130.00	15080	312
	2270		29240			4408
			4408			
		14.83	33648			

OPERATING IIA

	27898	11.03	30771	141.78	395538	4393
WELL	146	4.99	729	130.00	18980	312
	2935.8		31500			4705
			4705			
		12.33	36205			

OPERATING IIIA

	29895	11.70	34977	146.09	436736	4393
WELL	156	5.32	830	130.00	20280	312
	3145.5		35807			4703
			4703			
		12.88	40510			

OPERATING IB

	2817	11.32	31888	134.71	379478	4397
WELL	147	5.04	741	130.00	19110	312
	2964		32629			4709
			4709			
		12.60	37338			

OPERATING IC

	2650	12.46	33019	133.01	352477	4397
	140	4.77	668	130.00	18200	312
	2790		33687			4709
			4709			
		13.76	38396			

APPENDIX
C

WIND HEELING ARM TABLES

APPENDIX C

WIND HEELING ARM TABLES

The Tables in this appendix are from the original Trim & Stability Study by J. J. Henry Company, Inc. No numbers have been changed. The wind heeling arms are assumed to be the same due to a negligible change in draft.

J. J. HENRY CO., INC.
Naval Architects and Marine Engineers

NAME OF COMPANY _____

—JECT _____

J.O. No. 1736
SHEET NO. A-1 OF _____
DATE 4-3-75
COMP. BY PAO C'K'D BY _____

WIND HEELING ARM

$$HA = \frac{0.004\ V^2 AL\ \cos^2\theta}{2240\ \Delta}$$

$$= HA_o \cos^2\theta$$

WHERE V WIND SPEED IN KTS
A PROJECTED SAIL AREA
L LEVER ARM FROM HALF DRAFT TO CENTER OF SAIL AREA
θ HEEL ANGLE
HA_o HEELING ARM AT 0°

HA / COND.	HEELING ANGLES							
	HA_o	10°	20°	30°	40°	50°	60°	70°
CAPACITY COND	0.303	0.294	0.268	0.227	0.178	0.125	0.076	0.035
FULL LOAD	0.519	0.503	0.458	0.389	0.305	0.214	0.130	0.061
IA	0.584	0.566	0.516	0.438	0.343	0.241	0.146	0.068
IIA	0.431	0.418	0.381	0.323	0.253	0.178	0.108	0.050
IIIA	0.389	0.377	0.343	0.292	0.228	0.161	0.097	0.046
IB	0.425	0.412	0.375	0.319	0.249	0.176	0.106	0.050
IC	0.462	0.448	0.408	0.347	0.271	0.191	0.116	0.054

BASED ON V=100 KTS

APPENDIX
D

LIGHT SHIP WEIGHT ESTIMATE

APPENDIX D

LIGHT SHIP WEIGHT ESTIMATE

Following is a list of all the weight changes since the last Trim and Stability Study of 3/11/75. In summary a total of 38.67 tons were added at 28.43 feet above the base line and 107.94 feet aft of the F.P.

In addition, calculations for light ship originally performed by J. J. Henry Company, Inc. are included.

SHIP SEACON

REF. LINE FOR VERTICAL CENTERS IS 0 FEET ABOVE / BELOW MOLDED BASELINE

REF. LINE FOR LONGITUDINAL CENTERS IS F.P.

WEIGHT REMOVED AS OF 3-11-75

ITEM		WEIGHT *Tons*	VERTICAL LEVER *Feet*	VERTICAL MOMENT *Ft. tons*	FWD LEVER *Feet*	FWD MOMENT *Ft. tons*	AFT LEVER *Feet*	AFT MOMENT *Ft. tons*
Tank top engine plating		.14	3.0	.42	32.0	4.48		
Cleats		.074	15.5	1.147	138.25	10.23		
Bullwark in way of Cleats		.14	15.83	2.22	141.15	19.76		
Bins		.25	7.0	1.75	2.06	5.15		
Pipe		.03	1.0	.03	36.7	1.1		
Platform		.23	9.0	2.07	23.0	5.29		
Door		.10	13.0	1.3	22.2	2.22		
Day tank		.10	9.0	.90	29.0	2.9		
Door		.10	30.5	3.05	110.0	11.0		
Door		.10	19.0	1.9	127.0	12.7		
False Floor		.57	28.0	15.96	106.0	60.42		
Scuttle		.04	15.0	.6	250.0	10.0		
Posts		.33	32.0	10.6	41.0	13.53		
Engines		4.82	4.5	21.69	228	1098.96		
Chain		8.93	7.0	62.51	9.0	80.37		
Total		16.24	7.94	127.2	87.37	1400.0		

SHIP SEACON

REF. LINE FOR VERTICAL CENTERS IS 0 FEET ABOVE / BELOW MOLDED BASELINE

REF. LINE FOR LONGITUDINAL CENTERS IS F.P.

WEIGHT ADDED AS OF 3-11-75

ITEM		WEIGHT Tons	VERTICAL LEVER Feet	VERTICAL MOMENT Ft. tons	FWD LEVER Feet	FWD MOMENT Ft. tons	AFT LEVER Feet	AFT MOMENT Ft. tons
Rails		.52	25.8	13.416	32.0	16.64		
Winch plate & supports		5.60	25.94	145.3	44.04	2466		
Cable trough		.53	30.3	16.1	26.75	14.18		
Fairleads		.44	27.0	11.88	14.0	6.16		
Frame for anchor		2.25	18	40.5	12.0	27.0		
Fairlead Foundation (bow)		1.8	25.13	4523	14.0	25.2		
Fairlead & Foundation (stern)		2.12	16.0	3392	260.0	551.2		
Doubler Plating		8.91	15.0	133.65	222.5	1982.5		
Winches		20.54	29.83	612.7	41.0	842.14		
Wire		2.76	30.5	84.18	44	121.44		
Engines 12V-71		4.40	4.5	19.8	228	1003.2		
Diesel Exhaust trunk		.30	47.0	14.1	66.0	19.8		
Cleats		.20	15.5	3.1	141.15	28.2		
Platform		.23	9.0	2.07	17.0	3.91		
Door		.10	13.0	1.3	15.2	1.52		
Day tank		.26	10.4	2.70	29.0	7.54		
False Floor		.11	28.0	3.08	112.0	12.32		
Door		.10	31.5	3.15	110.0	11.0		

SHIP SEACUN

REF. LINE FOR VERTICAL CENTERS IS 0 FEET ABOVE / BELOW MOLDED BASELINE

REF. LINE FOR LONGITUDINAL CENTERS IS F.P.

WEIGHT ADDED AS OF 3-11-75

ITEM		WEIGHT Tons	VERTICAL LEVER Feet	VERTICAL MOMENT Ft. tons	FWD LEVER Feet	FWD MOMENT Ft. tons	AFT LEVER Feet	AFT MOMENT Ft. tons
Relorus Stands		.07	38.0	2.66	44.0	3.08		
Vent		.10	9.0	.9	194.0	19.4		
Spill boxes		.47	16.5	7.76	130.0	161.1		
Walkway		.041	3.0	.12	28.0	1.12		
Misc. Structure		2.84	10.2	28.97	200.2	568.7		
Total		54.69	22.43	1226.7	101.92	5574.0		

SHIP SEACON

REF. LINE FOR VERTICAL CENTERS IS 0 FEET ABOVE / BELOW MOLDED BASELINE

REF. LINE FOR LONGITUDINAL CENTERS IS F.P.

TOTAL WEIGHT CHANGES AS OF 3-11-75

ITEM		WEIGHT Tons	VERTICAL LEVER Feet	VERTICAL MOMENT Ft. tons	FWD LEVER Feet	FWD MOMENT Ft. tons	AFT LEVER Feet	AFT MOMENT Ft. tons
TOTAL WEIGHT TO REMOVE		16.024	7.94	127.2	87.37	1400.0		
TOTAL WEIGHT TO ADD		54.69	22.43	122.67	101.92	5574.0		
TOTAL		38.67	28.43	1099.4	107.94	4174.0		

ESTIMATE OF WEIGHT FOR SHIPS, WORK SHEET

"PROMISE"

DATE 4-1-75

DESCRIPTION	WEIGHT (Pounds) (Tons)	CENTER OF GRAVITY ABOVE BASE	MOMENTS	REFERRED TO FRAME NO. 17 ⊠ FWD	MOMENTS	AFT	MOMENTS	REFERRED TO PORT	MOMENTS	ST'BD	MOMENTS
EXISTING LIGHTSHIP	831	17.46	14,509			0.5	416				
TOTAL REMOVALS	-168	26.66	-4470			8.6	-1448				
TOTAL ADDITIONS	614	14.49	8899		1596						
WEIGHT MARGIN	15	14.83	222	4.49	67						
K.G. MARGIN		0.29									
SUB TOTAL	1292	15.10	19535	4.49	5800						
PASSIVE ANTI-ROLL TANKS	128	6.0	768	—		—					
TOTALS, POUNDS											
TONS	14.20	14.30	20303	4.08	5800						

COMPUTING BY

COMPUTING CHECKED

ESTIMATE OF WEIGHT FOR SHIPS, WORK SHEET

PAGE 220

USS PROMISE

DATE

DESCRIPTION	WEIGHT (Pounds) (Tons)	CENTER OF GRAVITY ABOVE BASE	MOMENTS	REFERRED TO FRAME NO. 17 FWD	MOMENTS	AFT	MOMENTS	REFERRED TO PORT	MOMENTS	ST'BD	MOMENTS
REMOVALS											
GROUP 100											
SHELL PLATING											
PROPELLER FWD 28 x 14.3#	428	—		110.0	33660	—					
PROPELLERS AFT 2 x 28 x 14.3	857	5.00	4285	—		110.0	94270				
WELL OPENING 16 x 32 x 14.3	7836	—		—		—					
SKEG 17' x 4' x 4 x 14.3#	4162	2.00	8323			112.0	466144				
" KEEL P. 20' x 2½' x 2 x 14.3#	1530	—	—			112.0	171360				
	14811	0.85	12608		—	47.13	698114				
GROUP 101											
LONG'LS 4 x 32' x 12.8#	1638	.5	819	—		—					
" 2 x 5' x 12.8#	128	5.0	640	—		110.0	14080				
CVK 10' x 3' x 15.3#	459	1.5	689	110.0	50490	—					
" 32' x 3' x 14.3#	1469	1.5	2204	—		—					
FLOOR FR 17 16' x 3' x 14.3#	734	1.5	1101	—		—					
FLOOR SKEG 4' x 2.5', 3, 2 x 14.3#	918	2.0	1836	—		110.0	100980				
	5346	1.38	7388		—	12.08	64570				
GROUP 102											
T.B. # 32' x 15' x 12.75#	6120	3.0	18360	—		—					
LONG'LS 32 x 4 x 11#	1408	2.75	3872	—		—					
T.B. # 2 x 21' x 12.75#	714	5.00	3570	—		110.0	79540				
	8242	3.13	25802	—		9.53	78540				
GROUP 107											
MAIN DECK 32' x 16' x 12.75#	6528	15.0	97920	—		—					
STIFFRS 32 x 7 x 25#	5600	14.75	82600	—		—					
	12128	14.88	180520	—		—					
GROUP 111											
OILSKIN HOUSE											
SILL 18 x 8 x 12# , 2	3456	33.0		86.0							
FRONT 8 x 8 x 10#	640	33.0									
BACK 8 x 8 x 10#	640	33.0									
HOUSE TOP 21 x 8 x 11#	1848	37.0									
MISC.	416	34.12									
	7000	34.12	238840	86.0	6.02000						
TOTALS, POUNDS											
TONS											

COMPUTING BY

COMPUTING CHECKED

ESTIMATE OF WEIGHT FOR SHIPS, WORK SHEET

PAGE 3-20

USS PROMISE

DATE

DESCRIPTION	WEIGHT (Pounds) (Tons)	CENTER OF GRAVITY ABOVE BASE	MOMENTS	REFERRED TO FRAME NO. 17 FWD	MOMENTS	AFT	MOMENTS	REFERRED TO PORT	MOMENTS	STBD	MOMENTS
REMOVALS											
GROUP 114											
BHD 17.											
R'G + STIFF. 15 x 15 x 20#.	4800	7.5		—		—					
LONG'L COFFE 8'x9'x12.75#x4	3672	7.5		—		—					
LONG'L STIFF. 8'-3 x 4 x 11#	1056	7.5		—		—					
LONG'L BHD 14 - 4½	8640	9.0	77760	26.0	311040	—					
	18168	8.21	149220	17.12	311040						
GROUP 115											
SHED											
COVER	5700	41.4		—		32.0					
FRAME	144220	41.4									
BHD (PLT. + STIFF.)	56880	20.75									
WEBS	18000	20.50									
WALKWAY + RAILS	6400	27.50									
TRACKS	8000	21.00									
MISC.	5000	28.00									
	243980		828840				7807360				
SUMMARY of REMOVALS											
GROUP 100	14811	0.85	12600		—		698114				
101	5346	1.38	7388		—		64570				
102	8292	3.13	25082		—		78540				
107	12128	14.86	180520		—		—				
111	7000	34.12	238840		602000		—				
114	18168		149220		311040		—				
115	243980		828840		—		7807360				
	309675	29.72	8892498			24.98	7725549				
TOTALS, POUNDS											
TONS											

COMPUTING BY

COMPUTING CHECKED

ESTIMATE OF WEIGHT FOR SHIPS, WORK SHEET
NAVSHIPS 4016A-2 (11-57)

U.S.S. PROWLER

BUDGET BUREAU NO. 45-R281
REPORT-BUSHIPS-0281-4

DATE

DESCRIPTION	WEIGHT (Pounds) (Tons)	CENTER OF GRAVITY									
		ABOVE BASE	MOMENTS	REFERRED TO FRAME NO. 17				REFERRED TO			
				FWD	MOMENTS	AFT	MOMENTS	PORT	MOMENTS	ST'BD	MOMENTS
REMOVALS											
GROUP 300											
2 - 60 KW AC GENERATORS	3000	6.0	18000	80.0	240000	—	—				
60 KW DC GENERATOR	1000	9.0	9000	—	—	95.0	95000				
301 SWITCHBOARD	600	7.0	4200	50.0	30000						
302 POWER DISTRIB. (CABLE)	1000	15.0	15000	80.0	80000						
303 LIGHTING SYST.	1500	26.0	39000	80.0	120000						
TOTALS, POUNDS	7100		85200		375000						
TONS	3.17	12.00	38.04	52.82	167.41						

COMPUTING BY

COMPUTING CHECKED

ESTIMATE OF WEIGHT FOR SHIPS, WORK SHEET
NAVSHIPS 4615A-2 (11-57)

U.S.S. PROMISE

BUDGET BUREAU NO. 45-R291
REPORT-BUSHIPS-0291-4

DATE

DESCRIPTION	WEIGHT (Pounds) (Tons)	CENTER OF GRAVITY									
		ABOVE BASE	MOMENTS	REFERRED TO FRAME NO. 17				REFERRED TO			
				FWD	MOMENTS	AFT	MOMENTS	PORT	MOMENTS	ST'BD	MOMENTS
REMOVALS											
GROUP 400 NAV. EQUIP.	500	30.0		92.0							
RADIO	300	30.0		88.0							
TOTALS, POUNDS	800	30.0		90.50	72400						
TONS	0.36	30.00	10.71	90.50	32.32						

COMPUTING BY

COMPUTING CHECKED

ESTIMATE OF WEIGHT FOR SHIPS, WORK SHEET
NAVSHIPS 4616A-2 (11-57)

U.S.S. PROMISE

BUDGET BUREAU NO. 45-R281
REPORT-BUSHIPS-9291-4

DATE

DESCRIPTION	WEIGHT (Pounds) (Tons)	CENTER OF GRAVITY									
		ABOVE BASE	MOMENTS	REFERRED TO FRAME NO. 17				REFERRED TO			
				FWD	MOMENTS	AFT	MOMENTS	PORT	MOMENTS	ST'BD	MOMENTS
REMOVAL											
GROUP 502											
DEHUMIDIFIED MACHY (2)	2240	17.0	38080	—	—	56.0	125440				
AIR CONDITIONING & HEATING	1500	6.0	9000	88.0	132000	—	—				
505 PLUMBING INSTALL.	2240	17.0	38080	80.0	179200	—	—				
516 MISC PIPING SYST.	10000	13.0	130000	64.0	640000	—	—				
520 MOORING TOWING ANCHORS	3500	14.0	49000	120.0	420000						
TOTALS, POUNDS	19480		264160		1,245,760						
TONS	8.70	13.56	117.93	63.95	556.14						

COMPUTING BY

COMPUTING CHECKED

ESTIMATE OF WEIGHT FOR SHIPS, WORK SHEET
NAVSHIPS 4618A-2 (11-57)

U.S.S. PROMISE

BUDGET BUREAU NO. 45-R201
REPORT-BUSHIPS-9201-4.

DATE

DESCRIPTION	WEIGHT (Pounds) (Tons)	CENTER OF GRAVITY									
		ABOVE BASE	MOMENTS	REFERRED TO FRAME NO. 17				REFERRED TO			
				FWD	MOMENTS	AFT	MOMENTS	PORT	MOMENTS	ST'BD	MOMENTS
REMOVALS											
GROUP 600											
LIFE RAFT (15 MEN)	200	28.0		64.0		—	—				
INCL. CRADLES	1000	21.5		47.0		—	—				
	100.0	9.0		98.0		—	—				
	1000	9.0		53.0		—	—				
	600	11.0		—		93.0	55800				
DECK COVERING	3000	15.0		80.0		—	—				
" "	200	27.0		86.0	2855000	—	—				
INSULATION	3000	24.0		80.0		—	—				
NONSTRUCTURAL BULKS & DOORS	20000	21.0		72.0		—	—				
FURNISHING FOR LIVING SPACES	6000	18.0		12.0		—	—				
GALLEY, WR & MESS	2500	18.0		110.0		—	—				
TOTALS, POUNDS	38500		747100		2799200						
TONS	17.19	19.41	353.53	72.71	1249.64						

COMPUTING BY

COMPUTING CHECKED

ESTIMATE OF WEIGHT FOR SHIPS, WORK SHEET

PAGE 8-20

USS PROMISE

DATE

DESCRIPTION	WEIGHT (Pounds) (Tons)	CENTER OF GRAVITY									
		ABOVE BASE	MOMENTS	REFERRED TO FRAME NO. 17				REFERRED TO			
				FWD	MOMENTS	AFT	MOMENTS	PORT	MOMENTS	S'BD	MOMENTS
SUMMARY OF REMOVALS											
GROUP 100	138.25		3969.87				345337				
200	—										
300	3.17		38.09		167.41						
400	0.36		10.71		32.32						
500	8.70		117.93		556.14						
600	17.19		333.53		1249.69						
TOTALS, POUNDS											
TONS	167.67	2666	4470.08			864	1447.86				

COMPUTING CHECKED

ESTIMATE OF WEIGHT FOR SHIPS, WORK SHEET

USS PROMISE

DATE

DESCRIPTION	WEIGHT (Pounds) (Tons)	CENTER OF GRAVITY ABOVE BASE	MOMENTS	REFERRED TO FRAME NO. 17 FWD	MOMENTS	AFT	MOMENTS	REFERRED TO PORT	MOMENTS	ST'BD	MOMENTS
ADDITIONS											
GROUP 100											
SKEG											
BOTT. PLG 14'x7.5"x2=14.3#	1071	2.50	2677			112.0	119952				
" " (12'x25'-2x56 ft).4.3#	2876	4.00	11504			111.0	319236				
FLOORS 7.0 S x 7 x 14.3#	750	6.00	4500			112.0	84000				
DOUBLE AT BOTT. 128'x4.5"x2 x2.5"#	29376	—	—	—	—	—	—				
" " " 16 x 2.5" x 2 x 2.5"#	2040	—	—	—	—	—	—				
BULWARKS P/S 2x3.4"x201'x30#	42210	16.75	707018			20.5	865304				
	78323	9.27	725699			17.73	1388493				
TONS	34.97		323.97				619.86				
GROUP 102											
INNER BOTT. FR 7-9 10'x12'x4.3#	1836	5.00		110.0							
AFT END BHD FR 9 10'x2'x15.3#	306	4.00		104.0							
SIDE BHDS FRS 7-9 2x12'x2'x14.3#	734	4.00		110.0							
LONG'L BOTT STIFF. 3x12'x11#	396	5.00		110.0							
VERT. BHD STIFF. 3x2'x11#	66	4.00		104.0							
	3338	4.67	15584	109.33	364948						
TONS	1.49		6.96		162.92						
GROUP 107											
DOUBLES AT MN.DK 64'x3.2x20.4#	7834	15.0	117504	—		—					
10.1%	3.50		52.46								
TOTALS, POUNDS											
TONS											

COMPUTING BY

COMPUTING CHECKED

ESTIMATE OF WEIGHT FOR SHIPS, WORK SHEET

"PROMISE"

DATE 2-24-75

DESCRIPTION ADDITIONS	WEIGHT (Pounds)	CENTER OF GRAVITY ABOVE BASE	MOMENTS	REFERRED TO FRAME NO. 17 (⊗) FWD	MOMENTS	AFT	MOMENTS	REFERRED TO ℄ PORT	MOMENTS	ST'BD	MOMENTS
GROUP III											
BETWEEN MAIN DK & 01 LEVEL											
TRANS BHD FR. 12 13.5'X12'X12#	1944	21.00		80.00						13.25	
FR. 13 13.5'X12'X12#	1944	21.00		64.00						13.25	
8.5'X12'X12#	1224	21.00		64.00				3.50			
FR 15 60'X12'X12#	5760	21.00		32.00				—		—	
01 LEVEL DK											
FR. 12~16, 40'X32'X12#	15360	27.00		32.00				—		—	
FR. 16~17, 3.5'X16'X13.5#	756	27.00		8.00				18.00			
11.5'X16'X13.5#	2484	27.00		8.00						13.25	
SIDE PLT'NG FR 14~17 (1/2)											
2X48'X12'X13.5#	15552	21.00		29.00				—		—	
BETWEEN 01 & 02 LEVEL											
FWD END BHD 48'X9'X17#	7344	31.5		92.00				—		—	
AFT END BHD 4.5'X9'X17#	432	31.5		16.00				—		—	
TRANS BHD FR. 12 28'X9'X12#	3024	31.5		80.00				—		—	
FR. 13 28'X9'X12#	3024	31.5		64.00				—		—	
FR 14 32'X9'X12#	3456	31.5		48.00				—		—	
FR 15 32'X9'X12#	3456	31.5		32.00				—		—	
02 LEVEL DK											
FR. 11~14 32'X49'X13.5#	19008	36.0		70.00				—		—	
FR 14~16 32'X32'X13.5#	13824	36.0		32.00				—		—	
SIDE PLT'NG FR 11~16 (1/2)											
2X76'X9'X13.5#	18468	31.5		54.00				—		—	
BETWEEN 02 LEVEL & TOP OF HSE											
FWD END BHD 24'X8'X12#	3264	40.0		92.00				—		—	
AFT END BHD 12'X8'X12#	1152	40.0		16.00				—		—	
TRANS. BHD FR. 12 24'X8'X12#	2304	40.0		80.00				—		—	
SIDE PLT'NG 1/2 2X32'X8'X13.5#	1152	40.0		64.00				—		—	
TOP OF HSE 672 FT² X 12.5#	16128	44.0		13.93				—		—	
PAGE TOTALS, POUNDS	193652		4540901		7271749						69021
TONS	64.13	31.61	2027	50.62	3246					0.98	31

COMPUTING BY

COMPUTING CHECKED

ESTIMATE OF WEIGHT FOR SHIPS, WORK SHEET

PAGE 11-20

DATE 2-25-75

PROMISE

DESCRIPTION	WEIGHT (Pounds) (~~Tons~~)	CENTER OF GRAVITY: ABOVE BASE	MOMENTS	REFERRED TO FRAME NO. 17 (X): FWD	MOMENTS	AFT	MOMENTS	REFERRED TO ℄: PORT	MOMENTS	ST'BD	MOMENTS
ADDITIONS											
GROUP 114											
LONG'L WT BHD, 32'x15'x15.3# (P)	7394	7.50		—		—		7.50			
BHD LONG'L STIFF. 5x32'x11# (P)	1760	7.50		—		—		7.50			
LONG'L WT BHD 32'x15'x15.3# (S)	7394	7.50		—		—				7.50	
BHD LONG'L STIFF 5x32'x11# (S)	1760	7.50		—		—				7.50	
TRANS. BHD FR.18, 20'x15'x15.3#	4590	7.50				16.00		—		—	
BHD VERT. STIFF 4x15'x11#	660	7.50				16.00		—		—	
NOZZLE(ANTI ROLL TK) 12'x24x26#/FT.	7488	9.00	67392	—		—		—		—	
TRANS. BHD FR.16, 40'x15'x15.3#	9180	7.50		16.00				—		—	
BHD VERT. STIFF 12x15'x11#	1980	7.50		16.00				—		—	
TRANS. WT BHDS @ 2.5'x15'x15.3#	2295	7.50		—		—		—		—	
TRANSV. BHD 18 24'x12'x14.3#	4306	9.00		—		16.0		—		—	
STIFF. 8x12'x11#	1056	9.00		—		16.0		—		—	
F.W. TANK TRANS. BHDS. 4x15'x7.5'	5760	8.30		36.00				—		—	
F.W. TANK LONG'L BHDS. 4x18'x7.5'	6912	8.30		36.00				—		—	
F.W. TANK TOP & 2x12'x15'x11#	6912	12.00		36.00				—		—	
F.W. TANK BOTT. & 2x15'x15'x11#	6912	4.50		36.00				—		—	
TRANS BHDS VERT STIFF 4x5x7.5'x11#	1650	8.30		36.00				—		—	
LONG'L BHD'S 4x6x7.5'x11#	1980	8.30		36.00				—		—	
TANK TOP LONG'L STIFF. 2x5x12'x11#	1980	12.00		36.00				—		—	
TANK BOTT LONG'L STIFF. 2x5'x12'x11#	1980	4.00		36.00				—		—	
PAGE TOTALS, POUNDS	83899	8.04	674522	14.74	[illegible]35[illegible]						
TONS	37.43		301.13		551.73			—	—	—	—

COMPUTING BY

COMPUTING CHECKED

ESTIMATE OF WEIGHT FOR SHIPS, WORK SHEET

PAGE 12-2C

"PROMISE"

DATE 2-26-75

DESCRIPTION ADDITIONS	WEIGHT (Pounds) ~~Tons~~	CENTER OF GRAVITY ABOVE BASE	MOMENTS	REFERRED TO FRAME NO. 17 (X) FWD	MOMENTS	AFT	MOMENTS	REFERRED TO ℄ PORT	MOMENTS	STBD	MOMENTS
GROUP 122											
CENTER WELL BUTT DOORS 15'x32'x3.5"	16800	0.6		—		—		—		—	
CENTER WELL DK HATCH 15'x32'x2.5"	12000	11.3		—		—		—		—	
ROLL-UP DOOR FR16-17 16'x8'x7"	4800	27.0		8.0				4.0			
ROLL-UP DOOR FR.17 12'x5'x7"	2100	21.0		—		—		4.0			
GROUP 122	33700		301380		22400				19600		
GROUP 123	15.04	8.91	135	0.66	10			6.58	9		
114	37.43	8.04	301	14.74	552			—		—	
111	64.13	31.61	2027	50.62	3246					0.48	31
102	1.49	4.67	7	109.33	163			—		—	
100	34.97	9.27	324	—		17.73	620	—		—	
107	3.50	15.00	52	—		—				—	—
	218.51		2896		3251						
WELD (1½% of ST.) 150	3.28	13.02	43	10.33	50						
TOTALS—POUNDS											
GROUP TOTAL — TONS	221.85	13.02	2889	15.33	3401					0.10	22

COMPUTING BY

COMPUTING CHECKED

ESTIMATE OF WEIGHT FOR SHIPS, WORK SHEET

BARGE "PROMISE"

PAGE 13-20

DATE 4-1-75

DESCRIPTION	WEIGHT (Pounds) (Tons)	CENTER OF GRAVITY: ABOVE BASE	MOMENTS	REFERRED TO FRAME NO. ⊠: FWD	MOMENTS	AFT	MOMENTS	REFERRED TO ℄: PORT	MOMENTS	ST'BD	MOMENTS
ADDITIONS											
GROUP 200											
GM-DIESEL PROP UNIT (RV-2)-300 HP	19000	5.5		98							
VS UNITS (2 UNITS) (6-71 GM)	28000	8				99					
VS VERT. AXIS PROP 4'-6" DIA	50000	-		110							
2-VS VERT AXIS PROP 4'11-6" DIA (2)	100000	4				110					
LINE SHAFTS 7'-2" DIA (TWO)	3000	4		104							
COUPLINGS 9" DIA (")	200	4		104							
BEARINGS 12" DIA (")	200	4		104							
2-LINE SHAFTS 16'-4" DIA (ATT)	9624	6				105					
COUPLINGS 9" DIA (")	400	6				105					
BEARINGS 12" DIA (")	400	6				105					
TOTALS, POUNDS	230824	4.18	964641			39.56	9130720				
TONS	103.05	4.16	430.65			39.56	4076.30				

COMPUTING BY

COMPUTING CHECKED

ESTIMATE OF WEIGHT FOR SHIPS, WORK SHEET

PAGE 14-20

BARGE "PROMISE"

DATE 2-26-75

DESCRIPTION	WEIGHT (Pounds) ±Deficit	CENTER OF GRAVITY: ABOVE BASE	MOMENTS	REFERRED TO FRAME NO. ⊗: FWD	MOMENTS	AFT	MOMENTS	REFERRED TO ℄: PORT	MOMENTS	ST'BD	MOMENTS
ADDITIONS											
GROUP 300											
2-200KW DETROIT DIESEL GEN	144000	6	864000	67	9216000			11	1584000		
EXH. PIPING (2") 6" x 120 LF	3450	5.5	18975	64	220800			11	37950		
MAIN SWITCH BOARD 36-4'x2'x7'	6,200	28	173600	22	136400			—	—	—	—
440/208 TRANSFORMER 100A	105	4	420	64	6720			11	1155		
CABLE:											
T-53 200'	190	9	1710	32	6080			—		—	
T-15S 110'	360		2700		9600			—		—	
T-6 17'	36		234		282			—		—	
T-4 32'	80		720		2560			—		—	
T-20 180'	60		540		1920			—		—	
T-26 66'	260		2340		8320			—		—	
D-9 400'	1711		15174		55104			—		—	
D-4 80'	10		90		340			—		—	
T-1 350'	70		630		2240			—		—	
T-20 180'	430		3870		13760			—		—	
T-20 180'	646		5814		20672			—		—	
T-26 60'	270		2430		9640			—		—	
T-20 90'	288		2592		9216			—		—	
T-20 90'	10		90		320			—		—	
SHORE POWER RECEPTACLE	1500	28.5	42750	22	33000			—		—	
LIGHTING 2-20 AMP 110 VOLT	1500	28.5	42750	22	33000			—		—	
WIRE WORK 1000'	2000	9	18000	32	64000			—		—	
TOTALS, POUNDS	224017				11188800				1623.00		
TONS	100.01	12.98	1297.70	49.94	499.5			72.5	72.5		

COMPUTING BY

COMPUTING CHECKED

ESTIMATE OF WEIGHT FOR SHIPS, WORK SHEET
NAVSHIPS 4810A-2 (11-57)

U.S.S. PROMISE

BUDGET BUREAU NO. 95-R281
REPORT-BUSHIPS-9291-4

DATE

DESCRIPTION	WEIGHT (Pounds) (Tons)	CENTER OF GRAVITY									
		ABOVE BASE	MOMENTS	REFERRED TO FRAME NO. 17				REFERRED TO			
				FWD	MOMENTS	AFT	MOMENTS	PORT	MOMENTS	ST'BD	MOMENTS
ADDITIONS											
GROUP 400											
WHEEL HOUSE & CHART & RADIO RM	4.0	37.5		86.0							
CONTROL RM.	5.0	29.5		24.0							
TOTALS, POUNDS											
TONS	9.0	33.05	297.50	51.55	464.00						

COMPUTING BY

COMPUTING CHECKED

ESTIMATE OF WEIGHT FOR SHIPS, WORK SHEET

PAGE 16-20

BARGE "PROMISE"

DATE 6-26-75

DESCRIPTION	WEIGHT (Pounds) (Tons)	CENTER OF GRAVITY: ABOVE BASE	MOMENTS	REFERRED TO FRAME NO. 52: FWD	MOMENTS	AFT	MOMENTS	REFERRED TO: PORT	MOMENTS	ST'BD	MOMENTS
"ADDITIONS"											
GROUP 500											
FIRE PUMP	6000	5.0	30000	52	312000					11	66000
2-FRESH PUMP	2000	〃	10000	〃	104000					〃	22000
FO TRANSFER PUMP	1000	〃	5000	〃	52000					〃	11000
SANITARY PUMP	900	〃	7000	〃	70500					〃	4410
STRIPPING PUMP	3750	〃	18750	〃	195000					〃	41250
SANITARY PRESS TK	1000	6	6000	95	95000			/		11	11000
FRESH WATER 〃 〃	1000	9	9000	32	32000			/		/	
STARTING AIR COMPRESSOR	2000	15.0	10000	64	128000					11	22000
2-SUPPLY FANS 25000 CFM (AFT)	1200	47.0	56400	50	60000			/		/	
2- 〃 〃 45000 CFM (FWD)	3000	29.5	88500	96	288000			/		/	
2- MUSHROOM VENT	800	29.5	23600	96	76800			/		/	
VENT TRUNKS	400	22	8800	95	38000			/		/	
HOT WTR TK	3500	7	24500	64	224000			/		11	38500
2- 30 TON A/C	1600	18	28800	62	99250			/		/	
1- 5 TON A/C	800	39	31200	23	18400			/		/	
SANITARY UNIT	800	45	3600	12	9600			/		/	
	800	〃	3600	〃	9600			/		/	
VENTING	800	〃	3600	〃	9600			/		/	
											77000
TOTALS, POUNDS											
TONS	12.97	12.44	161.41	6086	78934					7.00	38.50

COMPUTING BY DAS

COMPUTING CHECKED

ESTIMATE OF WEIGHT FOR SHIPS, WORK SHEET
NAVSHIPS 9616A-2 (11-57)

U.S.S. PROMISE

BUDGET BUREAU NO. 45-R281
REPORT-BUSHIPS-0281-4

PAGE 17-20

DATE

DESCRIPTION	WEIGHT (Pounds) (Tons)	CENTER OF GRAVITY									
		ABOVE BASE	MOMENTS	REFERRED TO FRAME NO. 17				REFERRED TO ℄			
				FWD	MOMENTS	AFT	MOMENTS	PORT	MOMENTS	ST'BD	MOMENTS
ADDITIONS											
GROUP 600											
LADDERS (INCL) (3) 01 LEV.	2200	32.0		46.0							
" " 3 MN. DK.	2900	21.0		32.0							
" " 2 HOLD	1950	9.0		—	—	—	—				
VERT. LADDERS 1	100	40.0		80.0							
MISC STRUCT. BHDS. 02 LEV.	3500	40.0		59.0							
BHDS 01 LEV.	24000	31.5		64.0							
MN. DK.	12000	21.0		64.0							
PAINTING	5000	26.0		60.0							
DECK COVERING											
MAIN DECK 101'x40'x1.3#	5408	15.00		52.00				—		—	
01 LEVEL 76'x32'x1.3#	3162	27.00		54.00				—		—	
02 LEVEL 672 Ft²x1.3#	874	36.00		73.43				—		—	
HULL INSULATION											
MN DK ~ 01 LEVEL 377'x12' x.7#	2327	21.00		51.00				—		—	
01 ~ 02 249'x 9' x.7#	1380	21.50		54.00				—		—	
02 ~ Top 150'x 8' x.7#	840	90.00		73.43		-		—		—	
01 DK 1504 Ft²x0.7#	1053	27.00		54.00				—		—	
02 DK 1760 x0.7#	1232	36.00		46.58				—		—	
Top of HSE 672 Ft²x0.7#	470	44.00		73.43				—		—	
WORK SHOP EQUIPMENT	10000	18.00		16.00				—		—	
EQUIPMENT FOR GALLEY	1800	18.00		110.0				—		—	
MESSROOM	3000	18.00		99.0				2.0			
FURNISHINGS FOR LIVING SPACES											
MN DK	13500	17.50		68.00				—		—	
01 LEVEL	11000	29.50		74.00				—		—	
TOTALS, POUNDS	147696		3515358		8795781				5000		
TONS	65.94	23.80	1569	59.55	3926			0.06	9		

COMPUTING BY

COMPUTING CHECKED

ESTIMATE OF WEIGHT FOR SHIPS, WORK SHEET
NAVSHIPS 901SA-2 (11-57)

U.S.S. PROMISE

BUDGET BUREAU NO. 95-R281
REPORT-BUSHIPS-0281-4

PAGE 18-26

DATE

DESCRIPTION	WEIGHT (Pounds) (~~Tons~~)	CENTER OF GRAVITY									
		ABOVE BASE	MOMENTS	REFERRED TO FRAME NO. 17 (A)				REFERRED TO ℄			
				FWD	MOMENTS	AFT	MOMENTS	PORT	MOMENTS	ST'BD	MOMENTS
ADDITIONS											
GROUP 600 (CONT'D)											
FURNISHINGS FOR OFFICE, ETC.											
PROJECT OFFICE	1800	30.0		38.5						9.00	
CHIEF & RADIO RM	500	39.0		14.0				—		—	
RANGE OFFICE	500	39.0		62.5				1.75			
CONT'L RM	1000	30.00		24.0				—		—	
WHEEL HOUSE	600	39.0		86.0				—		—	
FALSE FLOOR — CONT'L RM. 16'x22'x1½"	9216	28.00		24.0				—		—	
PAGE TOTALS, POUNDS	15616		409448		434334						15315
TONS	6.08	29.70	181	31.90	194					1.13	7

COMPUTING CHECKED

ESTIMATE OF WEIGHT FOR SHIPS, WORK SHEET
NAVSHIPS 4810A-2 (11-57)

U.S.S. PROMISE

BUDGET BUREAU NO. 45-R281
REPORT-BUSHIPS-0291-A

DATE

DESCRIPTION	WEIGHT (Pounds)	CENTER OF GRAVITY									
		ABOVE BASE	MOMENTS	REFERRED TO FRAME NO. 17				REFERRED TO			
				FWD	MOMENTS	AFT	MOMENTS	PORT	MOMENTS	ST'BD	MOMENTS
ADDITIONS.											
GROUP 600 (CONT'D)											
CRANE RAIL 600"x108'	64800	16.0		—		70.0		—			
CRANE	123200	29.0				29.0					
STERN ROLLER	25000	13.3				128.3					
PAGE TOTAL, POUNDS	213000		4642850				11193100				
	95.09	21.80	2072.70			52.55	4997	—		—	
PAGE 6-3	95.09	21.80	2073			52.55	4997	—		—	
6-2	6.08	29.76	181	31.90	194					1.12	7
6-1	65.94	23.80	1569	19.55	3926			0.06	9		
TOTALS, POUNDS											
GROUP TOTAL TONS	167.11	22.88	3823			5.25	877			—	3

COMPUTING BY

COMPUTING CHECKED

ESTIMATE OF WEIGHT FOR SHIPS, WORK SHEET

DATE

DESCRIPTION	WEIGHT (Pounds) (Tons)	CENTER OF GRAVITY									
		ABOVE BASE	MOMENTS	REFERRED TO FRAME NO.				REFERRED TO			
				FWD	MOMENTS	AFT	MOMENTS	PORT	MOMENTS	ST'BD	MOMENTS
SUMMARY OF ADDITIONS											
GROUP 100	221.85	13.02	2889	15.33	3401					0.1	22
200	103.05	4.18	430.65			39.56	4076.3				
300	100.01	12.98	1297.70	49.94	4995			7.25	725		
400	9.00	33.05	297.50	51.55	464						
500	12.97	12.44	161.41	60.86	789.38					7.62	96.5
600	167.11	22.88	3823			5.25	877			—	3
TOTALS, POUNDS											
TONS	613.99	19.49	8899.26	7.65	4696.08			0.98	603.5		

COMPUTING ENGINEER

REFERENCES

1. J. J. Henry Company, Inc., "Trim & Stability Study, Ocean Engineering Platform", March 11, 1975.
2. Drawing No. 1736-100-1, General Arrangement.
3. Drawing No. 1736-100-2, General Arrangement.
4. YF 614-50500-480780, ALT-5, Lines & corrected offsets.
5. Todd Shipyards Corporation, "Trim & Stability Booklet, Special Purpose Barge 'Compromise'".
6. "Barge Promise, Specifications for Work to be accomplished", Specification No. SND-018-76.
7. Drawing No. 3203-102, Main Deck Doubles Plating, NAVFACENGCOM.
8. Drawing No. 3203-101, Fairleader Foundation and Anchor Fender, NAVFACENGCOM.
9. Drawing No. 3017625, Deep Sea Anchor Installation, NAVFACENGCOM.
10. "Wind Heel Criteria", United States Coast Guard.

END

DATE
FILMED

6-86

DTIC